

# TC-WR701ES/WR735S

## SERVICE MANUAL

US Model

TC-WR701ES

Canadian Model

AEP Model

Australian Model

TC-WR735S



This photo is TC-WR701ES.

|                                    |                |              |
|------------------------------------|----------------|--------------|
| Model Name Using Similar Mechanism | TC-WR690/WR790 |              |
| Tape Transport Mechanism Type      | DECK A         | TCM-190RB11C |
|                                    | DECK B         | TCM-190RB11C |

### SPECIFICATIONS

Recording system 4-track 2-channel stereo  
Fast winding time Approx. 90 sec. (with Sony C-60 cassette)  
Bias AC bias  
Signal-to-noise ratio (at peak level and weighted)

| Cassette<br>(Dolby NR off) | Type IV | Type II | Type I |
|----------------------------|---------|---------|--------|
|                            | 58 dB   | 57 dB   | 55 dB  |

S/N ratio improvement (approximate values)  
with Dolby B NR on: 5 dB at 1 kHz; 10 dB at 5 kHz  
with Dolby C NR on: 15 dB at 500 Hz; 20 dB at 1 kHz  
with Dolby S NR on: 10 dB at 100 Hz; 24 dB at 1 kHz

Harmonic distortion 0.4% (with Type I, 160 nWb/m, 315 Hz, 3rd H.D.)  
1.8% (with Type IV, 250 nWb/m, 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

|                  |   |
|------------------|---|
| Type IV cassette | 30 - 19,000 Hz ( $\pm 3$ dB, IEC)<br>30 - 13,000 Hz ( $\pm 3$ dB (-4 dB) recording) |
| Type II cassette | 30 - 18,000 Hz ( $\pm 3$ dB, IEC)   |
| Type I cassette  | 30 - 16,000 Hz ( $\pm 3$ dB, IEC)   |

Type IV : Sony METAL-S  
Type II : Sony UX-S  
Type I : Sony HF-S

Wow and flutter  $\pm 0.13\%$  W.Peak (IEC)  
0.07% W.RMS (NAB)  
 $\pm 0.18\%$  W.Peak (DIN)

Inputs

|                              |                 |           |
|------------------------------|-----------------|-----------|
| Line inputs<br>(phono jacks) | Sensitivity     | 0.16 V    |
|                              | Input impedance | 47 k ohms |

Outputs

|                                   |                    |  |
|-----------------------------------|--------------------|--|
| Line outputs<br>(phono jacks)     | Rated output level | 0.5 V at a load impedance of 47 k ohms |
|                                   | Load impedance     | Over 10 k ohms                         |
| Headphones<br>(stereo phone jack) | Output level       | 1 mW at a load impedance of 32 ohms    |

### General

Power requirements 120 V AC, 60 Hz (US, Canadian model)  
220—230 V AC, 50/60 Hz (AEP, German model)  
240 V AC, 50/60 Hz (Australian model)  
Power consumption 33 W  
Dimensions Approx. 430×135×295 mm (w/h/d)  
(17×5<sup>3</sup>/<sub>8</sub>×11<sup>5</sup>/<sub>8</sub> inches) including projecting parts and controls  
Mass Approx. 4.8 kg (10 lbs 10 oz)

### Supplied accessories

Audio connecting cords (2)

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK  
**SONY**®



# Features

## For higher quality recording/playback

- The **Dolby HX PRO\*** system which improves the linearity of the tape's high-range response during recording.
- **B, C and S type Dolby NR\*** systems which reduce tape noise.
- **Automatic calibration on each deck** which ensures optimum recording conditions to bring out the best in every tape.


## For your convenience

- **Automatic tape type detection** during playback and recording.
- The **Multi-AMS and Memory Play** functions which provide easy access to a desired selection.
- A **relay function** for long recording and playback.
- **Auto play function** which automatically starts playback after tape rewinding to start.
- **Synchronized dubbing** at normal or high speed.
- **Simultaneous Recording function** for the simultaneous recording of the same source to cassettes in both decks.

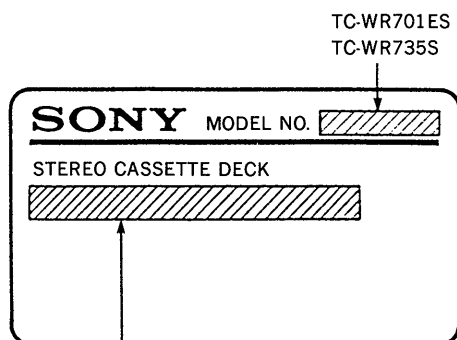
## For easier operation

- **Twin easy-to-read linear counters** which show the elapsed recording or playing time on each deck.
- An **optional remote commander** which allows the remote control of various operations.

\* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

## MODEL IDENTIFICATION (Specification Label)



US, Canadian model: AC 120V 60Hz 33W  
AEP, German model: AC 220—230V~50/60Hz 33W  
Australian model : AC 240V~50/60Hz

## SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

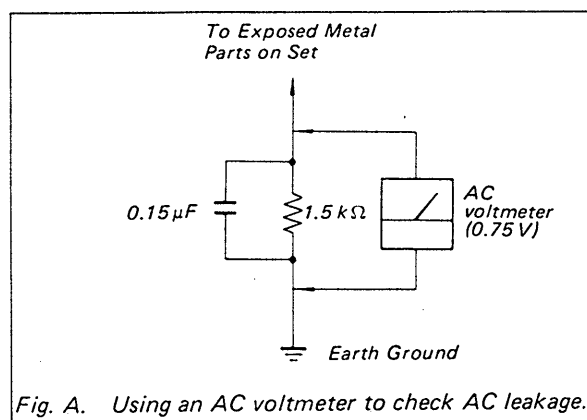




Fig. A. Using an AC voltmeter to check AC leakage.


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### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

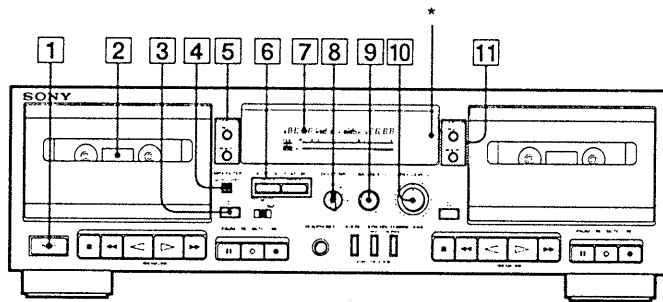
## SECTION 1 GENERAL

This section is extracted from instruction manual.

## Identifying the Parts

### Front Panel



For details, refer to the page number(s) indicated in parentheses.

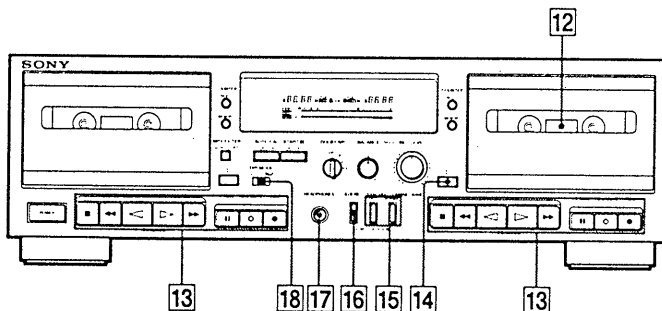


- 1** POWER switch
- 2** Deck A
- 3** ▲ (eject) button (deck A)
- 4** MPX (multiplex) FILTER ON/OFF switch (36)
- 5** COUNTER buttons (deck A) (30)  
RESET button  
MEMORY button
- 6** AUTO CAL (calibration) buttons (DECK A, DECK B) (48,50)
- 7** Display panel
- 8** DOLBY NR (Dolby noise reduction) switch (18,22,32,42,44)
- 9** BALANCE control (32)
- 10** REC (recording) LEVEL control (32,36)
- 11** COUNTER buttons (deck B) (30)  
RESET button  
MEMORY button

#### \* Remote control sensor

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark and cassette deck control capability.



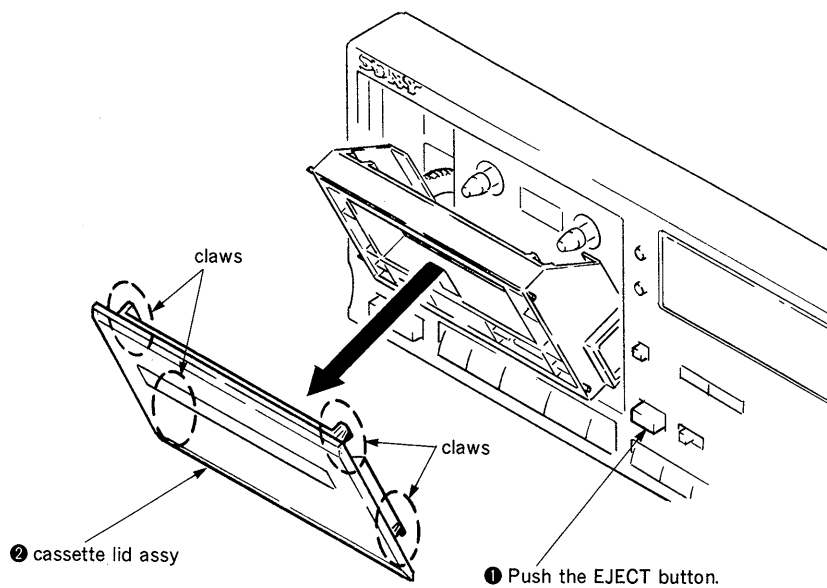
- 12** Deck B
- 13** Tape operation buttons
  - (stop) button
  - ◀◀ (leftward fast winding) (Multi-AMS\*\*) button
  - ◀ (reverse play) button
  - ▶ (forward play) button
  - ▶▶ (rightward fast winding) (Multi-AMS\*\*) button
  - || PAUSE button.
  - REC MUTE (record muting) button (46)
  - REC (recording) button
- 14** ▲ (eject) button (deck B)
- 15** SYNCHRO DUBBING buttons (52)  
HIGH speed button  
NORMAL speed button
- 16** A+B REC (simultaneous recording) button (42)
- 17** HEADPHONES jack (stereo phone jack)
- 18** DIR (direction) MODE switch (18,22,32,42,44,52)

\*\* AMS is an abbreviation for Automatic Music Sensor.

## SECTION 2 DISASSEMBLY

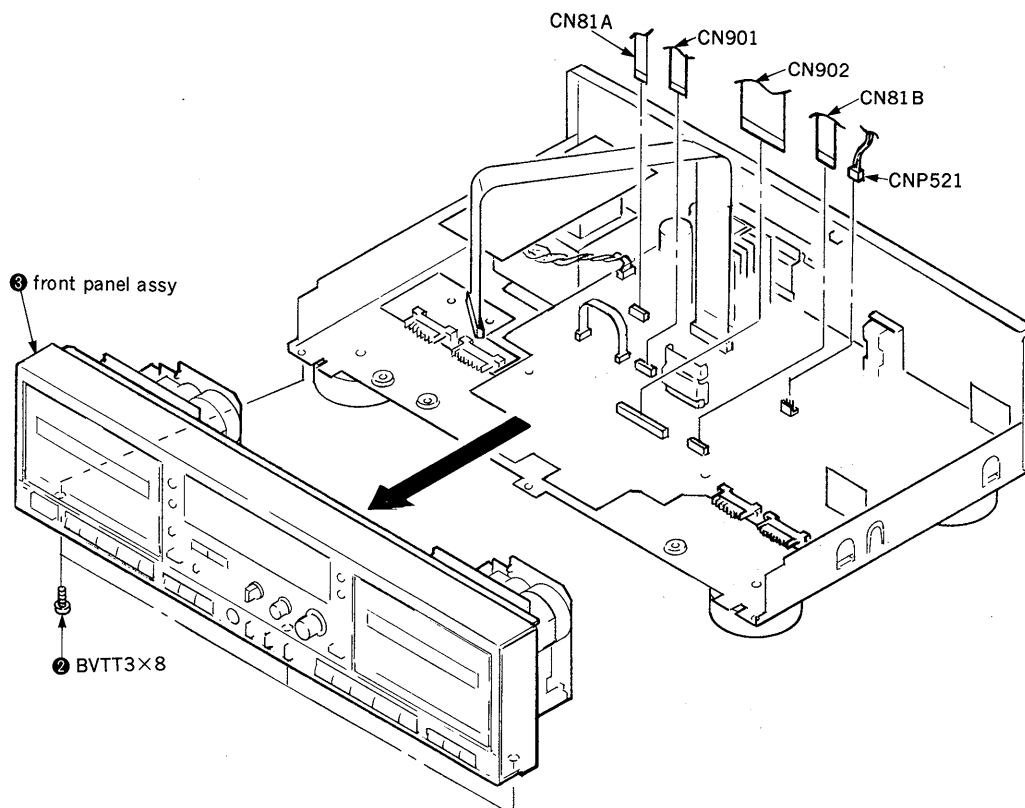
**Note :** Follow the disassembly procedure in the numerical order given.

### 2-1. CASSETTE LID ASSY

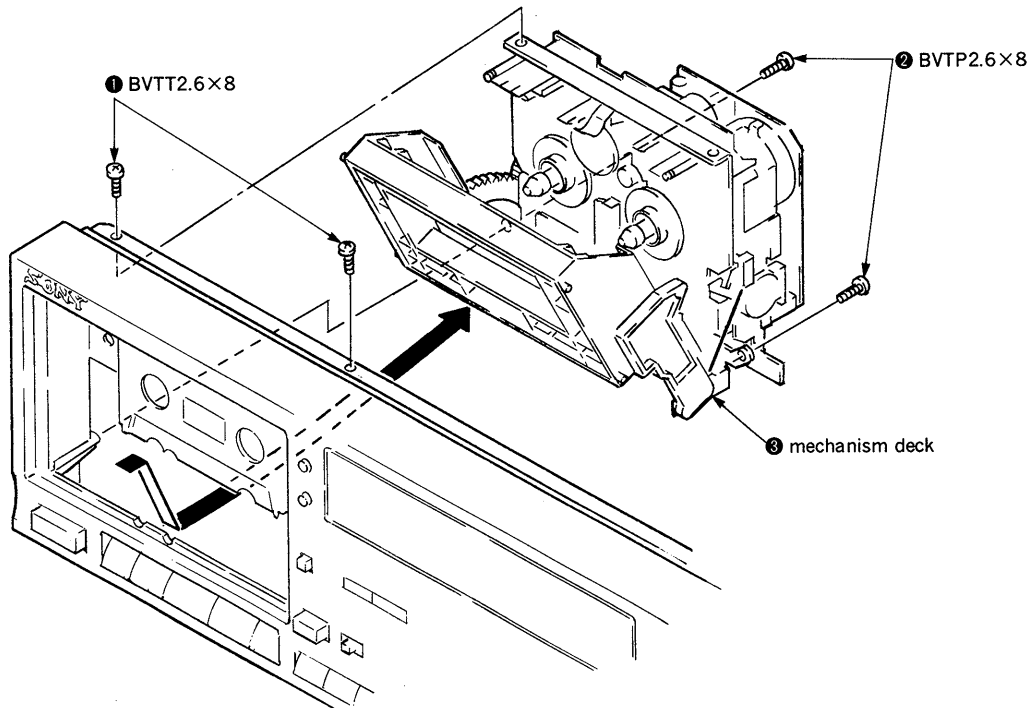


### 2-2. FRONT PANEL ASSY

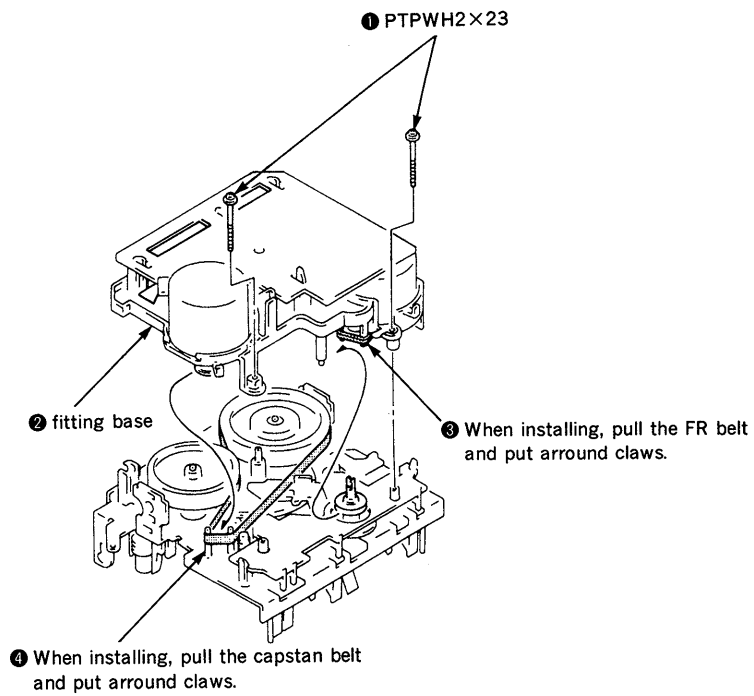
① Remove the connectors.



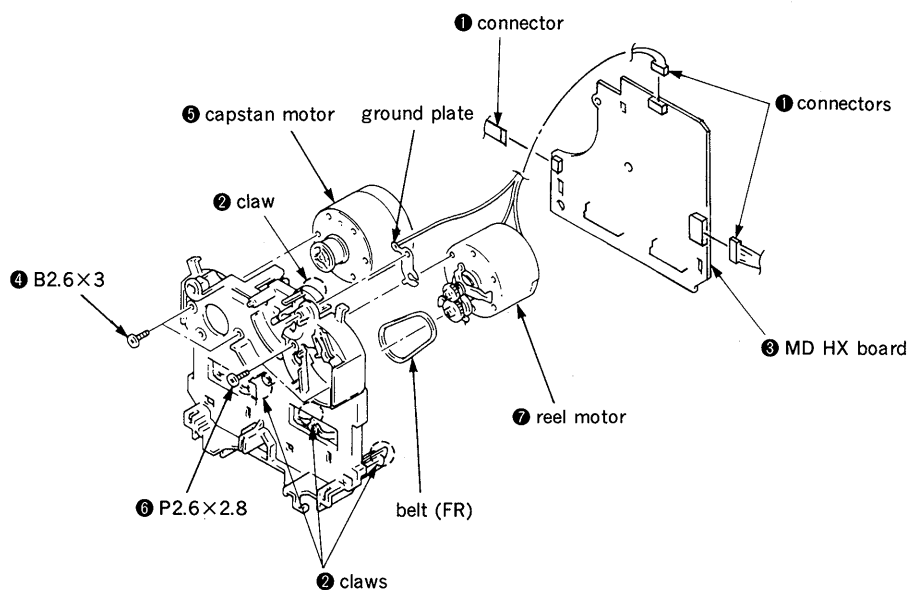
## 2-3. MECHANISM DECK



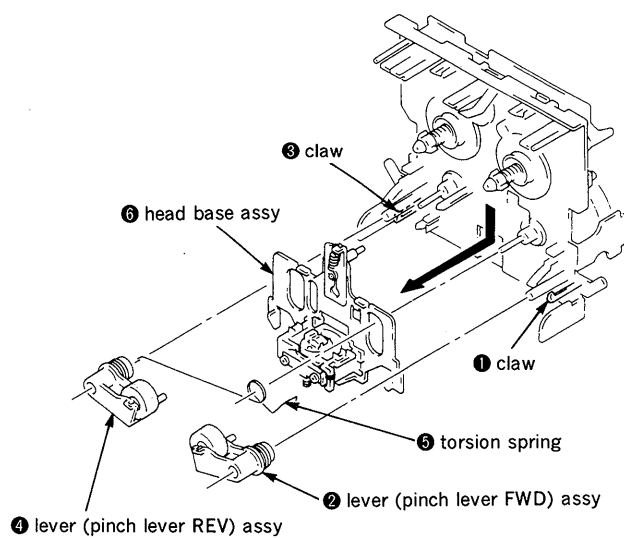
## 2-4. CAPSTAN MOTOR, REEL MOTOR (1)



## 2-5. CAPSTAN MOTOR, REEL MOTOR (2)



## 2-6. HEAD, PINCH ROLLER



## SECTION 3 MECHANICAL ADJUSTMENTS

### PRECAUTION

- Clean the following parts with a denatured alcohol-moistened swab :
 

|                            |              |
|----------------------------|--------------|
| record/playback/erase head | pinch roller |
| rubber belts               | idlers       |
| capstan                    |              |
- Demagnetize the record/playback head with a head demagnetizer.  
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustment.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

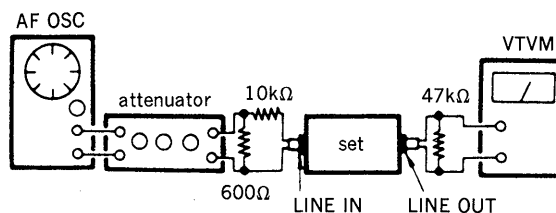
| Torque                  | Torque meter | Meter reading                           |
|-------------------------|--------------|---|
| Forward                 | CQ-102C      | 30 to 65g•cm<br>(0.42 to 0.90 oz•inch)  |
| Forward<br>back tension | CQ-102C      | 1 to 6g•cm<br>(0.014 to 0.08 oz•inch)   |
| Reverse                 | CQ-102RC     | 30 to 65g•cm<br>(0.42 to 0.90 oz•inch)  |
| Reverse<br>back tension | CQ-102RC     | 1 to 6g•cm<br>(0.014 to 0.08 oz•inch)   |
| Forward,<br>Reverse     | CQ-201B      | 70 to 120g•cm<br>(0.98 to 1.67 oz•inch) |

## SECTION 4 ELECTRICAL ADJUSTMENTS

### PRECAUTION

- The adjustment should be performed in the publication.  
(Be sure to make playback adjustment at first.)
- The adjustment and measurement should be performed for both L-CH and R-CH.
  - Switch position  
DOLBY NR switch : OFF  
DIR MODE switch : ⇄
  - Standard record position  
Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

—Record Mode—



### Standard Input Level

| Input terminal     | LINE IN       |
|--------------------|---------------|
| source impedance   | 10kΩ          |
| input signal level | 0.25V (−10dB) |

### Standard Output Level

| Output terminal     | LINE OUT     |
|---------------------|--------------|
| load impedance      | 47kΩ         |
| output signal level | 0.44V (−5dB) |

### Test Tape

| Tape     | Contents     | Use                   |
|----------|--------------|-----------------------|
| P-4-A100 | 10kHz, −10dB | Azimuth Adjustment    |
| P-4-L300 | 315Hz, 0dB   | Level Adjustment      |
| WS-48B   | 3kHz, 0dB    | Tape Speed Adjustment |

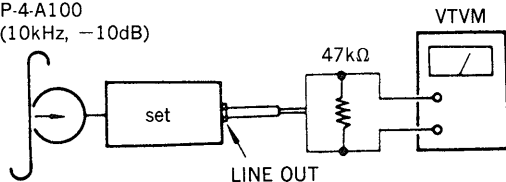
## Record/Playback Head Azimuth Adjustment

**DECK A** **DECK B**

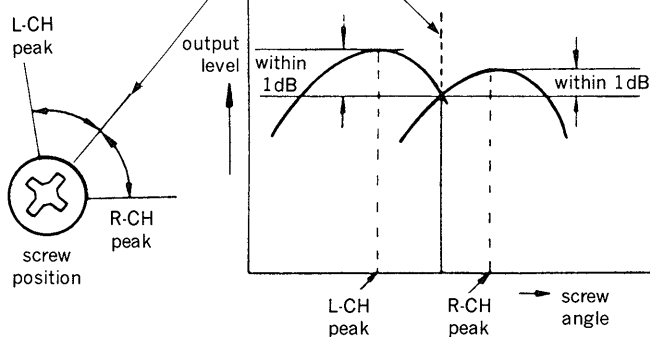
### Procedure :

1. Reverse Playback Mode

test tape  
P-4-A100  
(10kHz, -10dB)

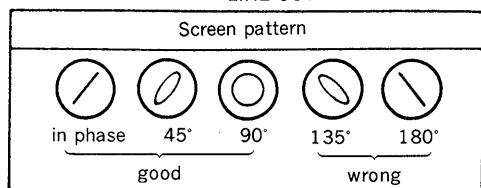
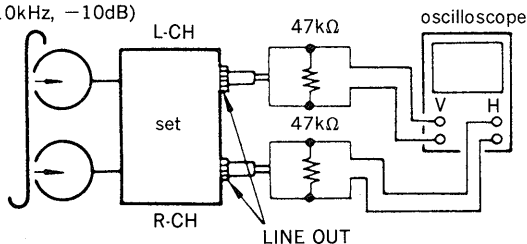


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



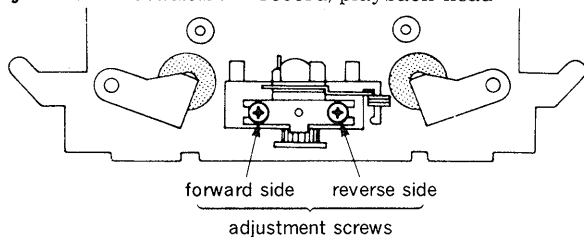
3. Playback Mode

test tape  
P-4-A100  
(10kHz, -10dB)



4. Change the forward playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

**Adjustment Location :** —record/playback head—



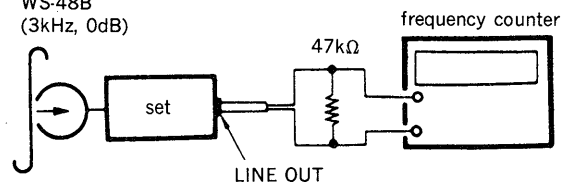
## Tape Speed Adjustment **DECK A** **DECK B**

Perform high speed adjustment before normal speed adjustment.

### Procedure :

—Forward Playback Mode—

test tape  
WS-48B  
(3kHz, 0dB)



(high speed adjustment)

1. Short the connector TP1 (pins ① and ②). (test mode)
2. Keep on pressing the SYNCHRO DUBBING HIGH switch.
3. Adjust each RV72 so that the frequency counter reading becomes within adjustment limits of  $6,000 \pm 20\text{Hz}$  on both of deck A and deck B.
4. Change the reverse playback mode and repeat the steps 2 and 3.

(normal speed adjustment)

5. After adjustment, open the connector TP1.
6. Keep on pressing the SYNCHRO DUBBING NORM switch.
7. Adjust each RV71 so that the frequency counter reading becomes within adjustment limits of  $3,000 \pm 10\text{Hz}$  on both of deck A and deck B.
8. Change the reverse playback mode and repeat the steps 6 and 7.

Frequency difference between the beginning and the end of the tape should be within 3%.

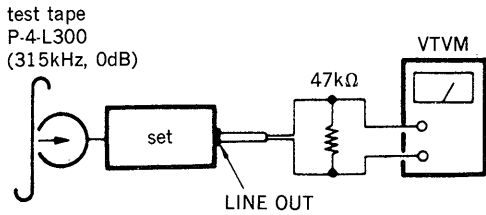
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

**Adjustment Location :** MD HX board

## Playback Level Adjustment DECK A DECK B

### Procedure :

—Forward Playback Mode—



Adjust each RV11 (L-CH) and RV21 (R-CH) so that the VTVM reading becomes within adjustment limits below on both of deck A and deck B.

### Adjustment Limits :

LINE OUT level :  $-7.7 \pm 0.5\text{dB}$  (0.301 to 0.338V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

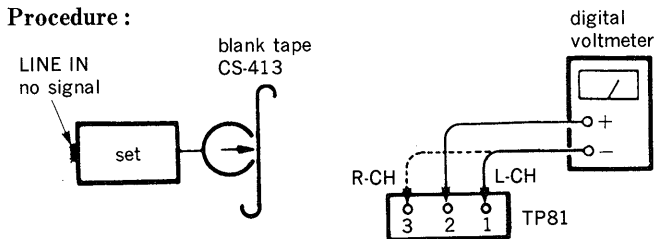
**Adjustment Location :** MD HX board

## Bias Consumption Current Adjustment

### DECK A DECK B

This adjustment should be performed when replacing the head assy or the bias oscillating transformer (T81, T91).

### Procedure :



1. Connect the digital voltmeter to test point TP81.
2. Set RV81 (L-CH) and RV91 (R-CH) to mechanical center.
3. Set to forward record mode.
4. Adjust T81 (L-CH) and T91 (R-CH) so that the digital voltmeter reading becomes minimum.

**Adjustment Location :** MD HX board

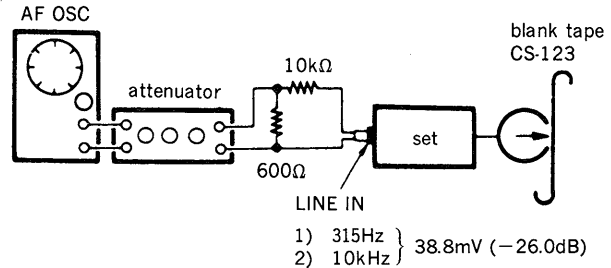
## Record Bias Adjustment DECK A DECK B

### Setting :

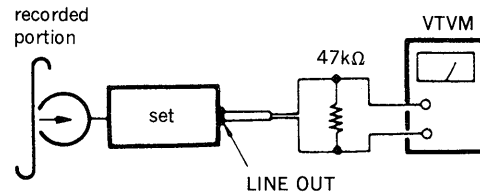
REC LEVEL control : standard record position (Refer to page 8.)

### Procedure :

1. Record Mode



2. Playback Mode



3. Playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
4. If the adjustment limits are not satisfied, adjust each RV81 (L-CH) and RV91 (R-CH) so that the VTVM reading becomes within adjustment limits below.

### Adjustment Limits :

10kHz playback output

relative to the 315Hz output :  $0 \pm 0.5\text{dB}$

(0.732 to 0.821V)

**Adjustment Location :** MD HX board

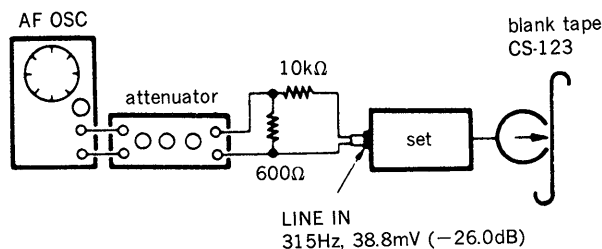
## Record Level Adjustment **DECK A** **DECK B**

### Setting :

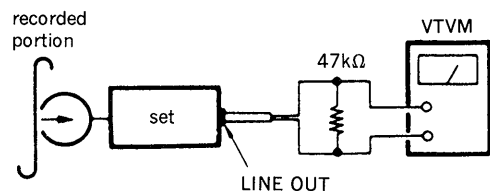
REC LEVEL control : standard record position (Refer to page 8.)

### Procedure :

#### 1. Record Mode



#### 2. Playback Mode



(Deck A)

- Playback the signal recorded in step 1, and confirm that the playback output level is VTVM reading becomes within adjustment limits below.
- If the adjustment limits are not satisfied, adjust each RV181 (L-CH) and RV281 (R-CH) so that the VTVM reading becomes within adjustment limits below.

(Deck B)

- Similarly, playback the signal recorded in step 1, and confirm that the playback output level is VTVM reading becomes within adjustment limits below.
- If the adjustment limits are not satisfied, adjust each RV171 (L-CH) and RV271 (R-CH) so that the VTVM reading becomes within adjustment limits below.

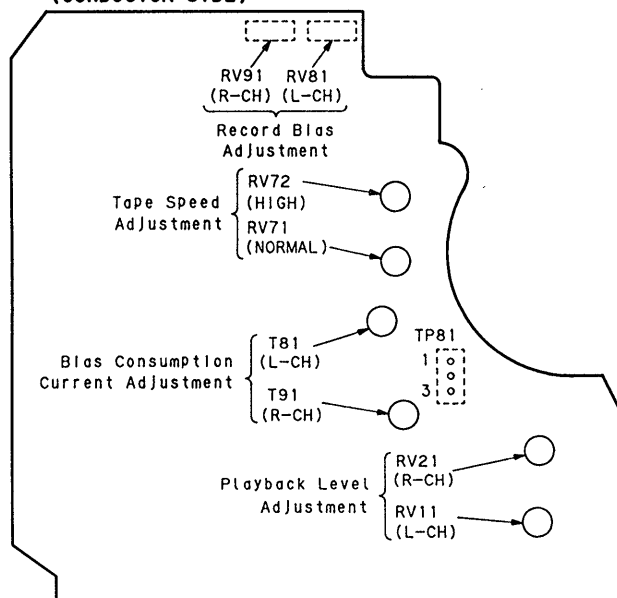
### Adjustment Limits :

315Hz playback output level :  $-26.0 \pm 0.5\text{dB}$  (36.7 to 41.1mV)

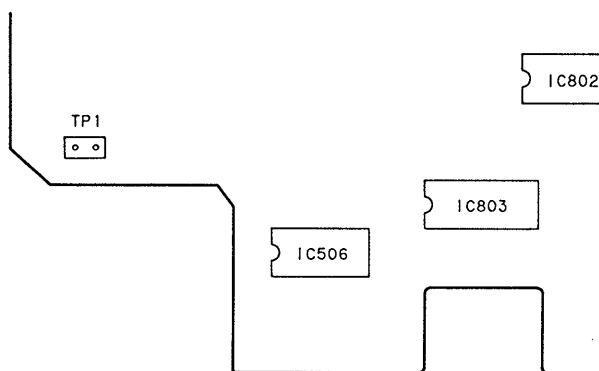
Adjustment Location : main board

### Adjustment Location :

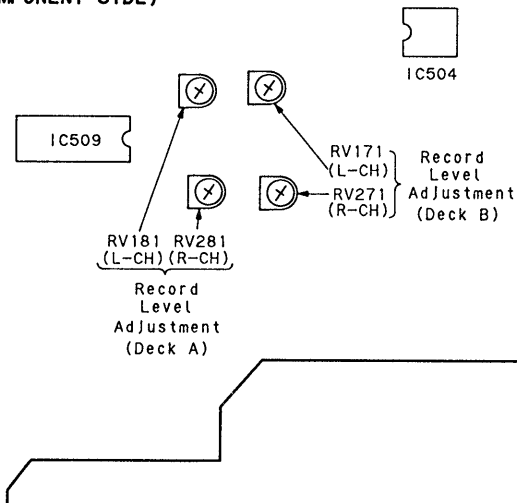
#### 【MD HX BOARD】 (CONDUCTOR SIDE)



#### 【MAIN BOARD】 (COMPONENT SIDE)

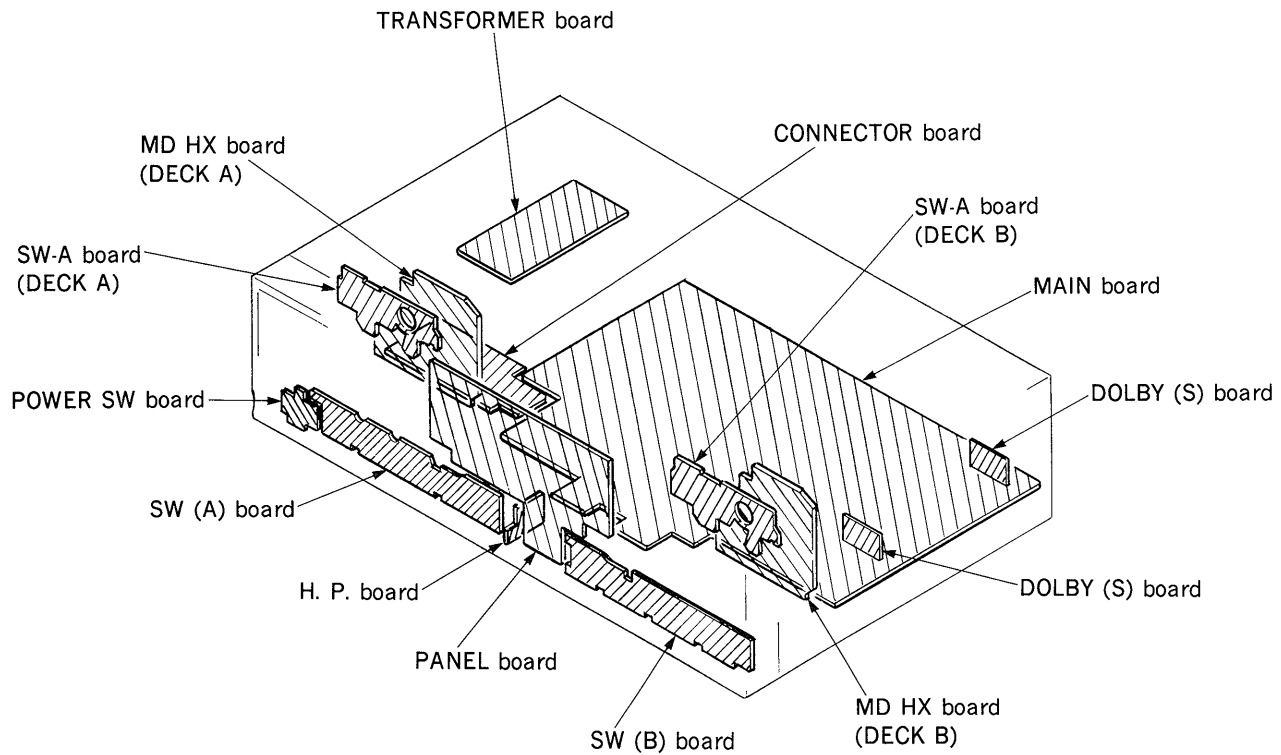


#### 【MAIN BOARD】 (COMPONENT SIDE)



## SECTION 5 DIAGRAMS

### 5-1. CIRCUIT BOARDS LOCATION



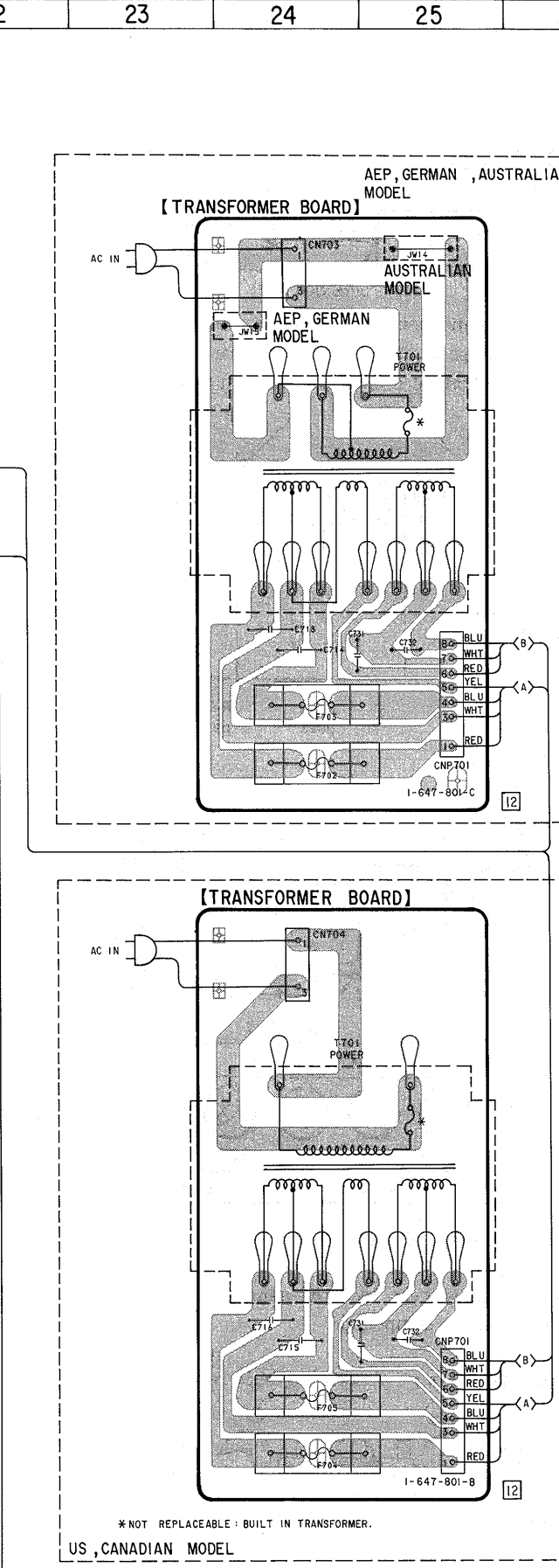
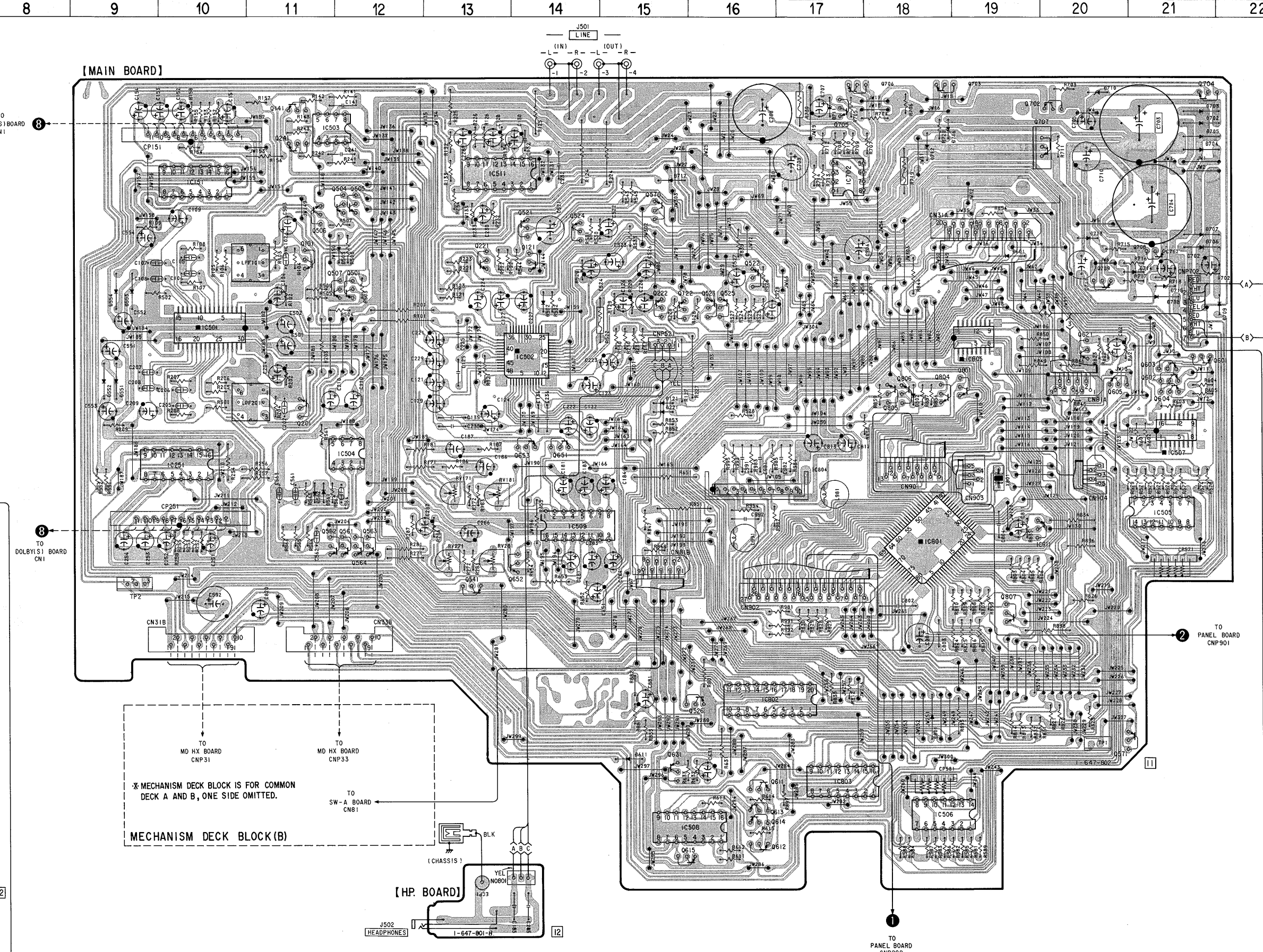
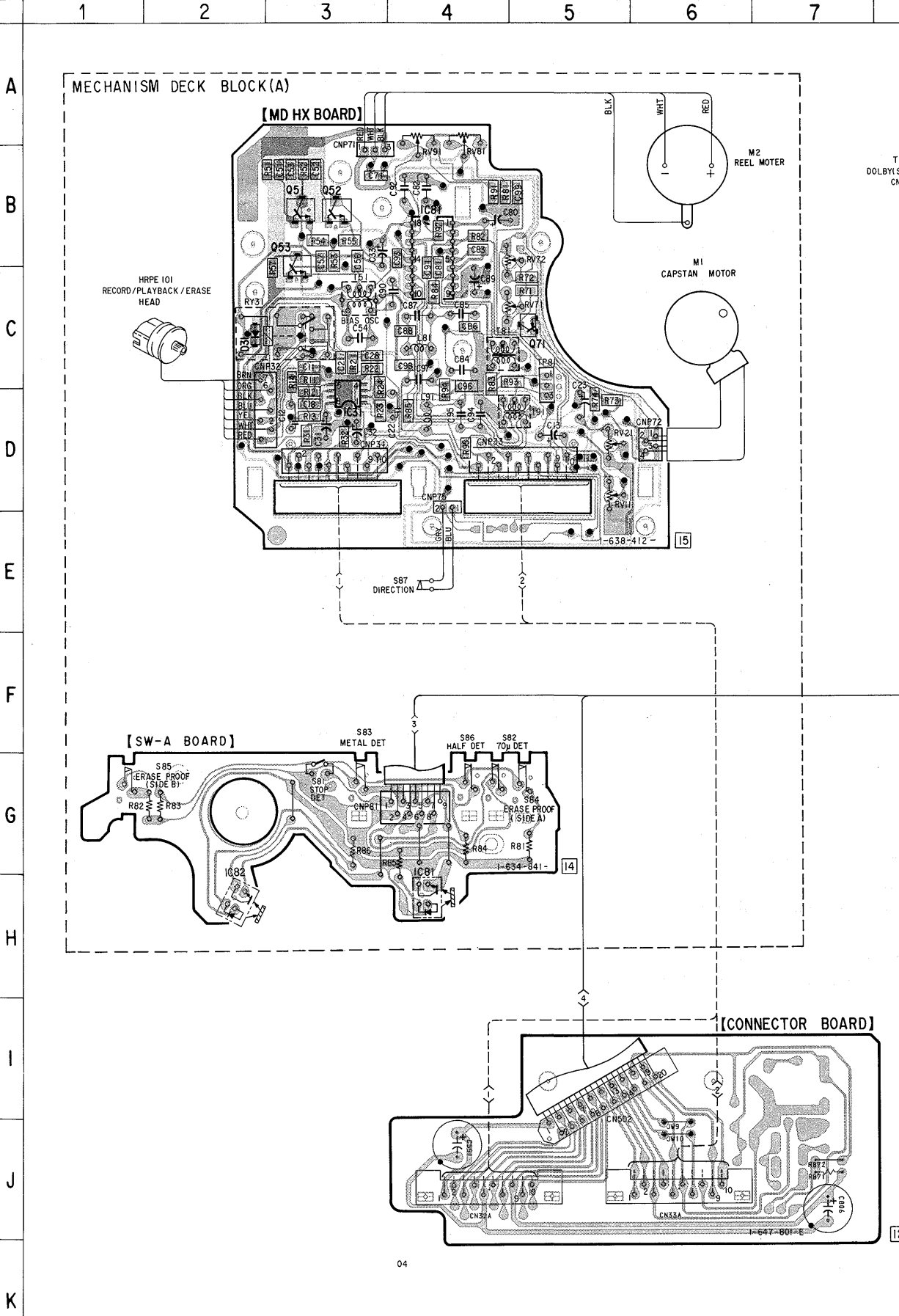
● Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D31      | C-2      | Q52      | B-3      |
| D121     | E-15     | Q53      | B-3      |
| D221     | E-15     | Q71      | C-5      |
| D502     | D-14     | Q101     | C-11     |
| D505     | C-12     | Q121     | C-14     |
| D551     | E-9      | Q122     | D-15     |
| D552     | E-9      | Q141     | B-11     |
| D553     | D-9      | Q201     | E-11     |
| D554     | D-9      | Q221     | C-13     |
| D561     | F-11     | Q222     | D-15     |
| D562     | F-11     | Q241     | B-11     |
| D601     | C-19     | Q501     | D-12     |
| D611     | I-15     | Q504     | C-12     |
| D702     | B-21     | Q505     | C-12     |
| D703     | B-21     | Q506     | C-11     |
| D704     | B-21     | Q507     | D-12     |
| D705     | B-21     | Q521     | C-14     |
| D706     | C-21     | Q522     | C-16     |
| D707     | C-21     | Q523     | D-16     |
| D708     | D-21     | Q524     | C-14     |
| D709     | D-21     | Q525     | D-16     |
| D710     | A-20     | Q526     | H-16     |
| D711     | A-17     | Q541     | G-13     |
| D712     | B-18     | Q561     | F-12     |
| D713     | C-20     | Q562     | F-11     |
| D714     | C-21     | Q563     | F-12     |
| D715     | D-21     | Q564     | F-12     |
| D716     | B-18     | Q570     | C-15     |
| D717     | B-15     | Q571     | I-20     |
| D801     | H-18     | Q601     | D-21     |
| D802     | E-18     | Q602     | E-21     |
|          |          | Q603     | D-21     |
|          |          | Q604     | E-21     |
|          |          | Q605     | E-20     |
| IC31     | D-3      | Q611     | I-16     |
| IC81     | B-4      | Q612     | J-16     |
| (IC81)   | H-4      | Q613     | I-16     |
| IC82     | H-2      | Q614     | J-16     |
| IC151    | B-10     | Q615     | J-15     |
| IC251    | F-10     | Q621     | D-20     |
| IC501    | D-10     | Q631     | I-15     |
| IC502    | D-14     | Q651     | E-14     |
| IC503    | B-11     | Q652     | G-14     |
| IC504    | E-12     | Q653     | E-14     |
| IC505    | F-21     | Q702     | B-20     |
| IC506    | J-18     | Q703     | A-18     |
| IC507    | E-21     | Q704     | A-21     |
| IC508    | J-15     | Q705     | B-17     |
| IC509    | F-14     | Q706     | A-17     |
| IC511    | B-13     | Q707     | B-19     |
| IC702    | B-17     | Q708     | C-21     |
| IC801    | F-18     | Q709     | C-20     |
| IC802    | H-16     | Q801     | E-19     |
| IC803    | I-17     | Q804     | E-18     |
| IC804    | F-16     | Q805     | E-18     |
| IC805    | D-19     | Q806     | E-18     |
| IC811    | F-19     | Q807     | G-19     |
| Q51      | B-3      |          |          |

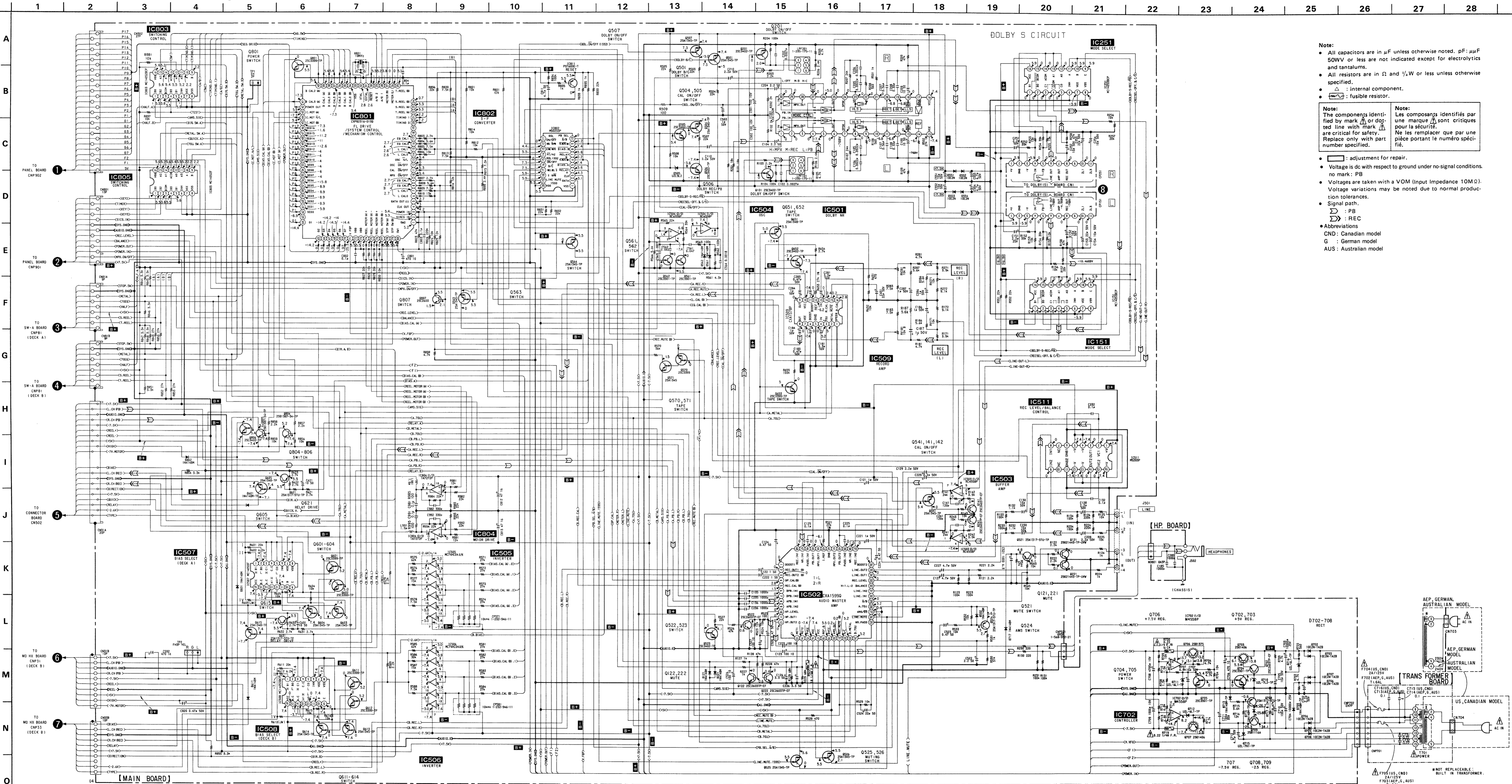
( ): SW-A BOARD

- Note:
- : parts extracted from the component side.
  - : parts mounted on the conductor side.
  - : Through hole.
  - ▨ : Pattern on the side which is seen.
  - ▩ : Pattern of the rear side.

5-2. PRINTED WIRING BOARDS —MAIN SECTION— ● Refer to Page 27 for Semiconductor Lead Layouts.

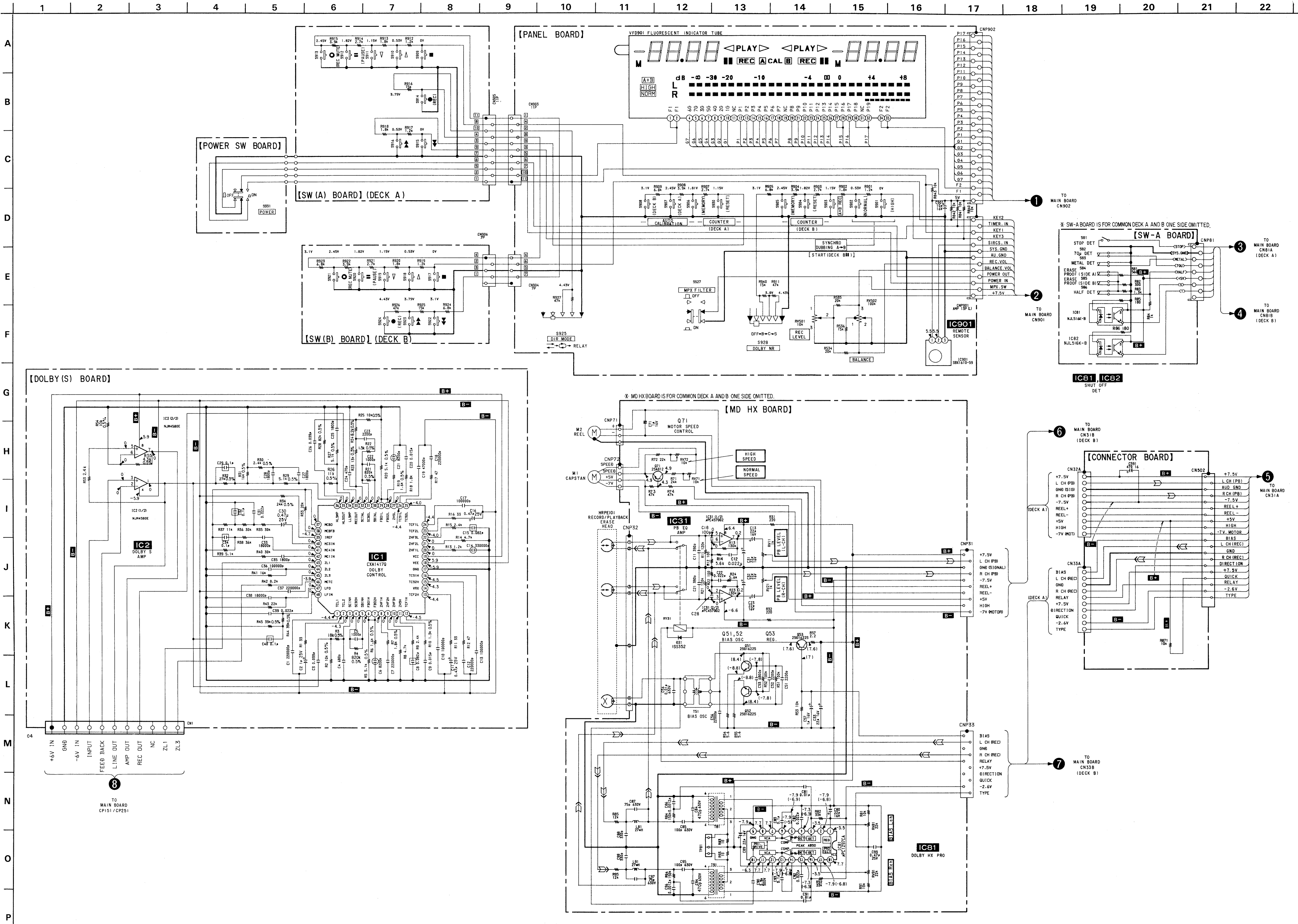


5-3. SCHEMATIC DIAGRAM —MAIN SECTION— • Refer to Page 28 for IC Block Diagrams.

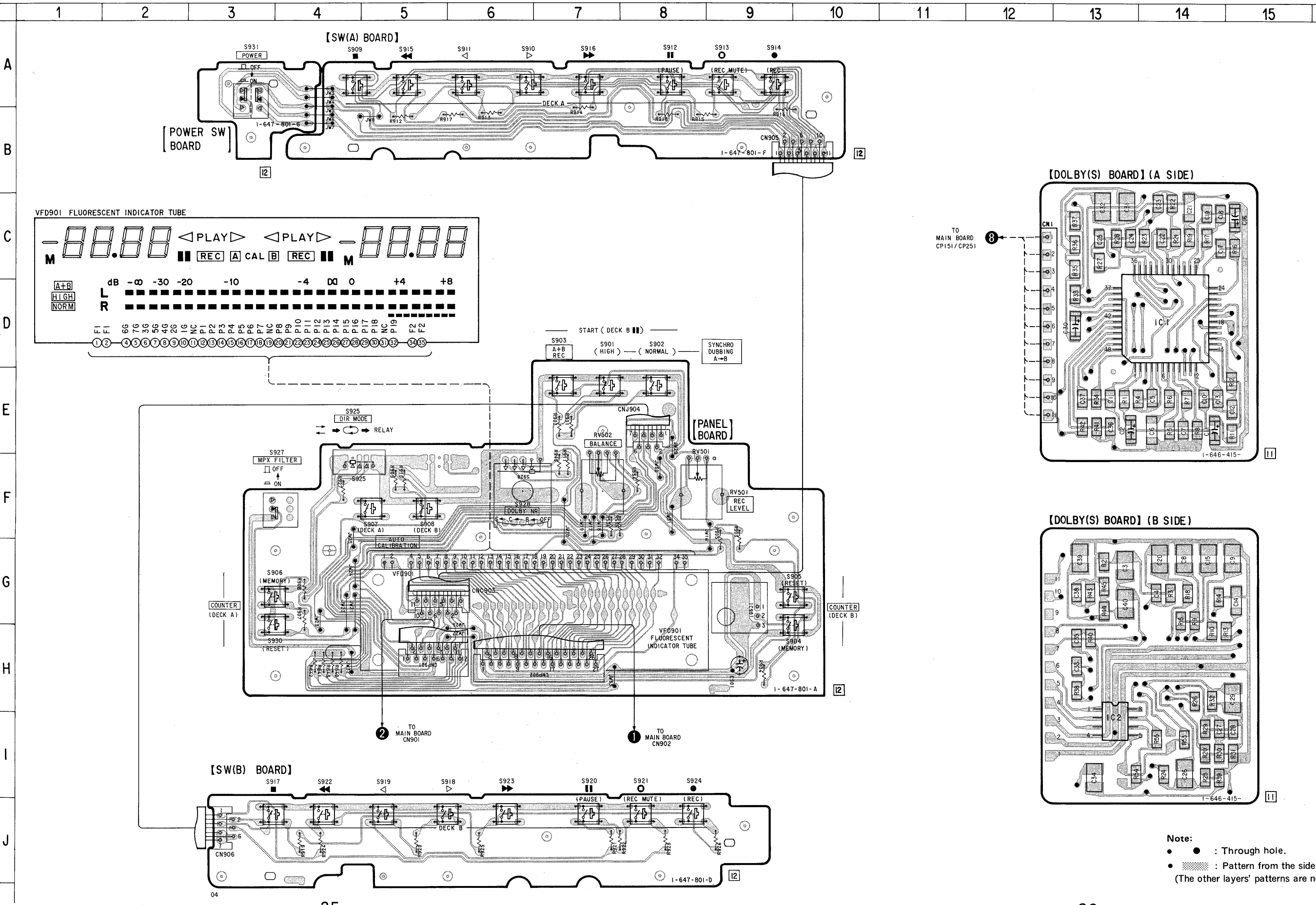


- Note:
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{2}\text{W}$  or less unless otherwise specified.
  - $\Delta$ : internal component.
  - $\nabla$ : fusible resistor.
- Note:
- The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.
- Note:
- Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
- $\square$ : adjustment for repair.
  - Voltage is dc with respect to ground under no-signal conditions. no mark: PB
  - Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Signal path.
  - $\square$ : PB
  - $\square$ : REC
  - Abbreviations
  - CND: Canadian model
  - G: German model
  - AUS: Australian model

5-4. SCHEMATIC DIAGRAM —PANEL SECTION— • Refer to Page 28 for IC Block Diagrams.

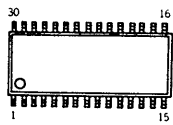


5-5. PRINTED WIRING BOARDS —PANEL SECTION—



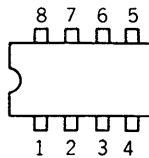
# 5-6. SEMICONDUCTOR LEAD LAYOUTS

CXA1332M



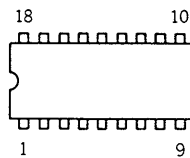
TOP VIEW

M5218AP



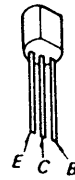
(Top view)

$\mu$ PC1297CA

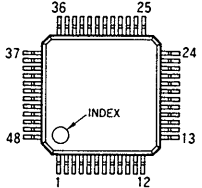


(Top view)

2SB1116A-L  
2SD1387-3

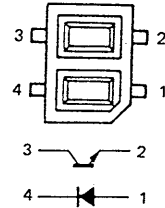


CXA1417Q  
CXA1599Q

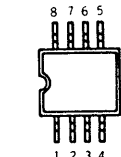


(TOP VIEW)

NJL5165K-B (H1)

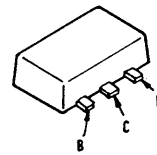


$\mu$ PC4570G2

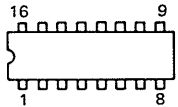


(TOP VIEW)

2SD1622-S

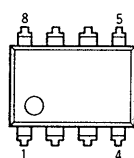


CXA1578P  
HD14053BFP  
MC14052BCP  
M5283P  
UP14053BC



(TOP VIEW)

NJM4580E-D  
 $\mu$ PC4558C

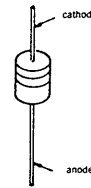


(TOP VIEW)

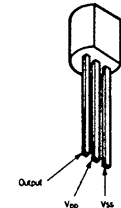
DTA114ES  
DTA144ES  
DTC114ES  
DTC143TS  
2SA1317-STU  
2SC2603-EF  
2SD2144S-UVW



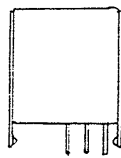
HZS6A1L  
HZS9A2L  
UZL-7H1  
UZL-7L2



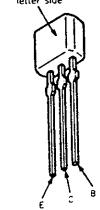
PST600E-T



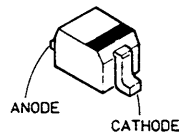
SBX1610-59



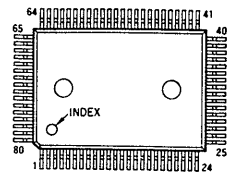
DTC144ES



MA110

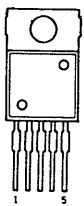


CXP82316-019Q

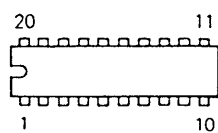


(TOP VIEW)

MC14052BF

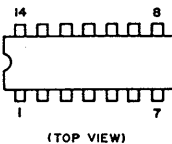


M50255P



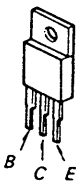
(Top view)

SN74HC04N

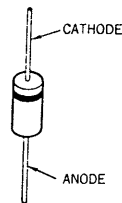


(TOP VIEW)

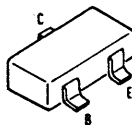
2SB1094-LK  
2SD1406-YGR



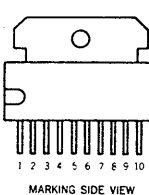
1N4148M  
10E2N



2SA1162-G  
2SA1235-F



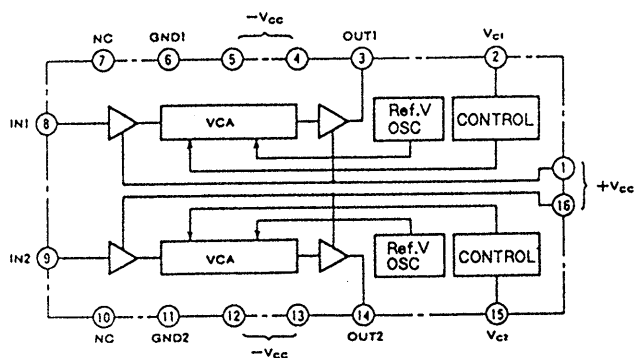
TA7272P



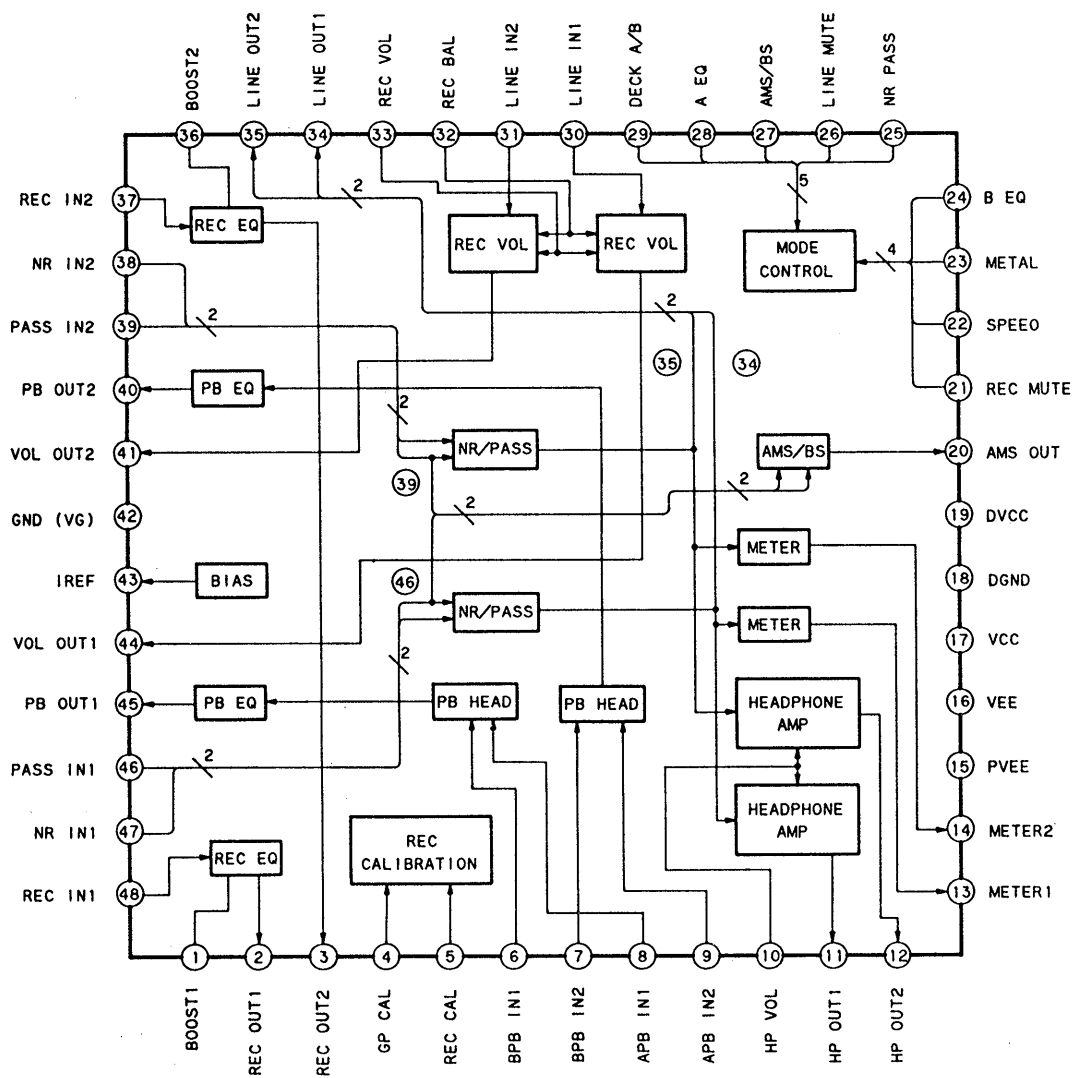
MARKING SIDE VIEW

• IC Block Diagrams

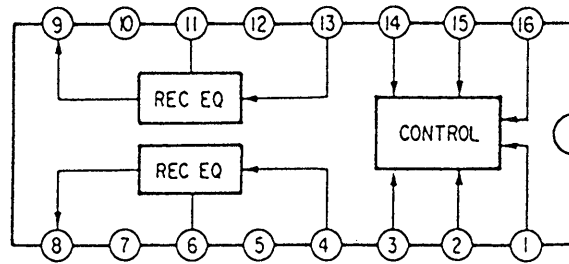
IC511 M5283P



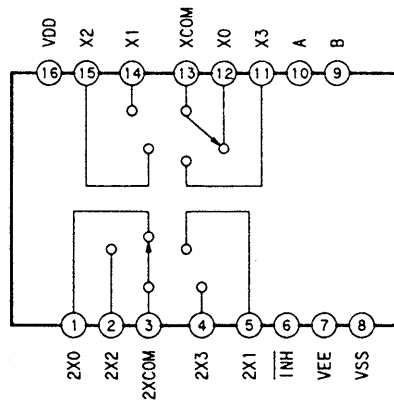
IC502 CXA1599Q



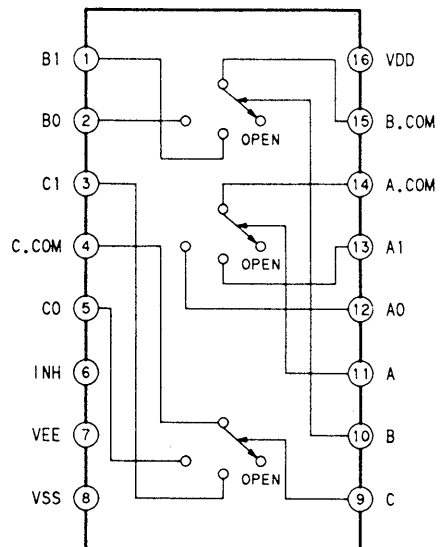
**IC509 CXA1578P**



**IC803, 805 MC14052BCP**



**IC151, 251, 507, 508 MC14053BCP**



## SECTION 6 EXPLODED VIEWS

### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### ● Abbreviations

G : German model

AUS : Australian model

### 6-1. CABINET SECTION

▲ B : TRANSFORMER board (US, Canadian model)

▲ C : TRANSFORMER board (AEP, G, AUS model)

▲ E : CONNECTOR board

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example :

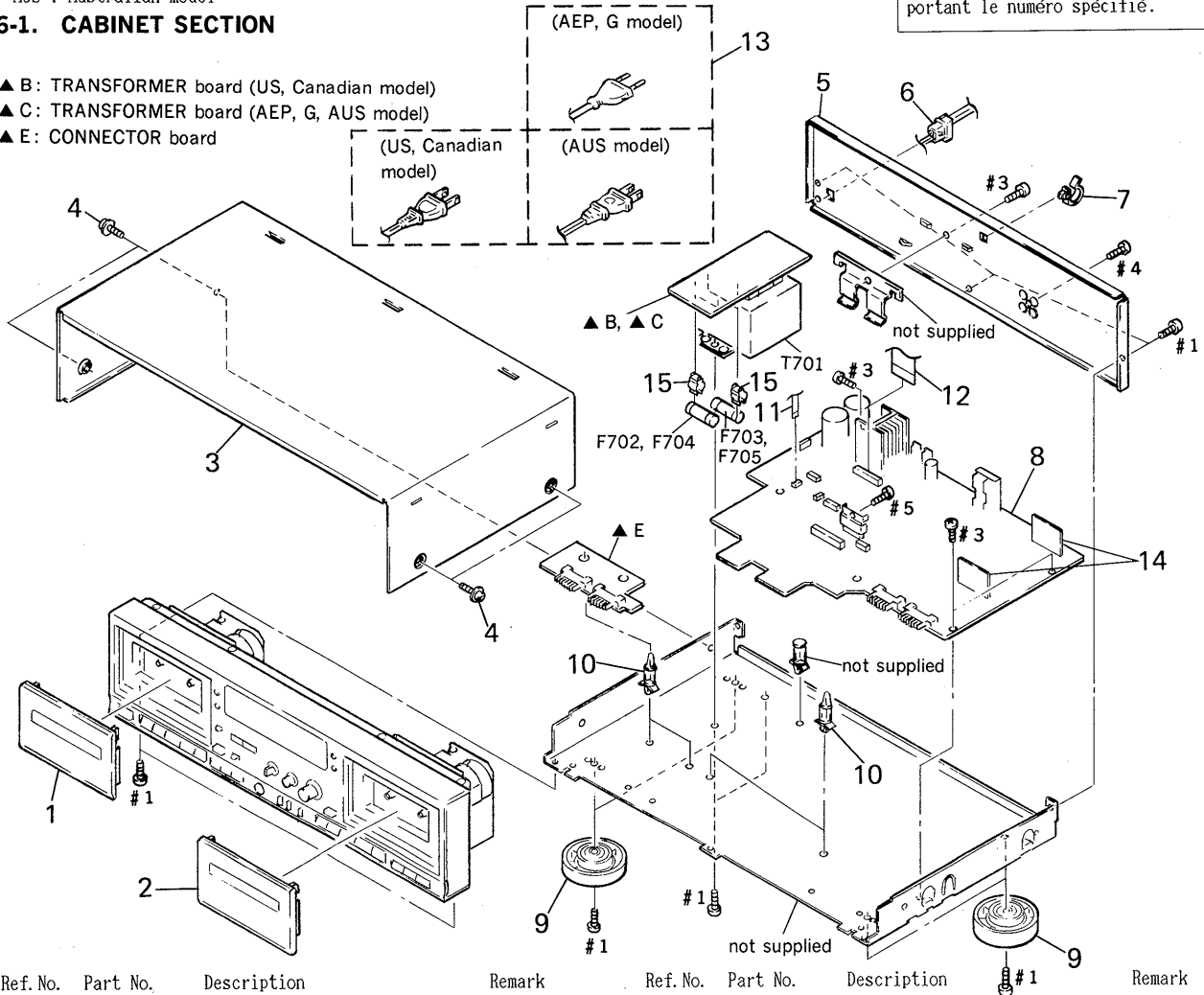
KNOB, BALANCE (WHITE)... (RED)

Parts Color Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

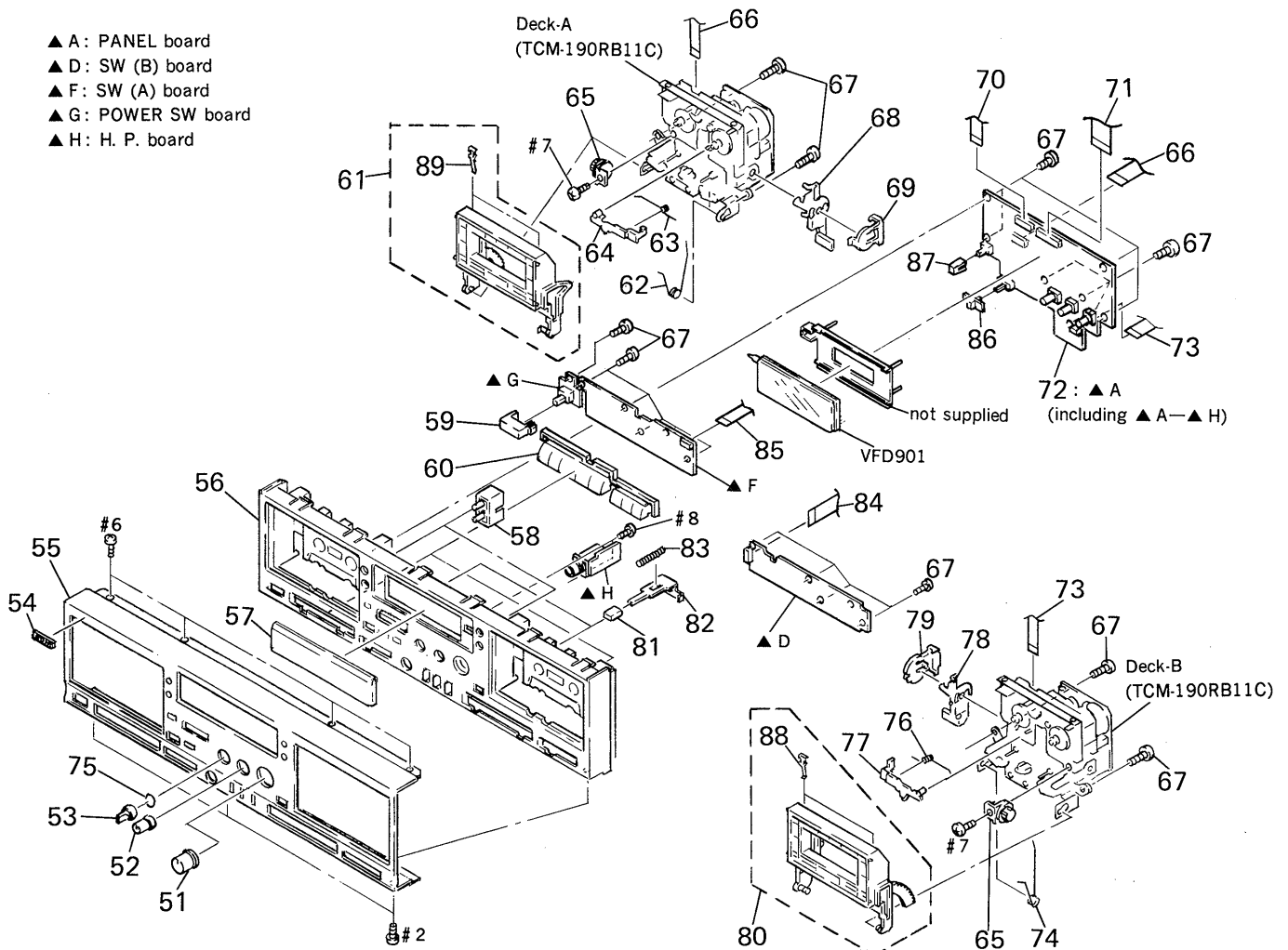


| Ref. No. | Part No.     | Description                                     | Remark |
|----------|--------------|---|--------|
| 1        | X-3366-515-1 | LID ASSY (A), CASSETTE (WR701ES)                |        |
| 1        | X-3366-517-1 | LID ASSY (A), CASSETTE (WR735S)                 |        |
| 2        | X-3366-516-1 | LID ASSY (B), CASSETTE (WR701ES)                |        |
| 2        | X-3366-518-1 | LID ASSY (B), CASSETTE (WR735S)                 |        |
| * 3      | 4-929-294-42 | CASE  |        |
| 4        | 3-704-366-01 | SCREW (CASE) (M3X8)                             |        |
| * 5      | 3-387-824-01 | PANEL, BACK (WR701ES)                           |        |
| * 5      | 3-387-824-11 | PANEL, BACK (WR735S:Canadian)                   |        |
| * 5      | 3-387-824-21 | PANEL, BACK (WR735S:AEP, G)                     |        |
| * 5      | 3-387-824-31 | PANEL, BACK (WR735S:AUS)                        |        |
| * 6      | 3-703-244-00 | BUSHING (2104), CORD (WR735S)                   |        |
| * 6      | 3-703-571-11 | BUSHING (S) (4516), CORD (WR701ES)              |        |
| * 7      | 4-949-235-01 | HOOK (WR735S:Canadian, AEP, G, WR701ES)         |        |
| * 8      | A-2007-028-A | MAIN BOARD, COMPLETE (WR735S:Canadian, WR701ES) |        |
| * 8      | A-2007-057-A | MAIN BOARD, COMPLETE (WR735S:AEP, G, AUS)       |        |
| 9        | 4-943-148-32 | FOOT (F58175SW) (WR735S:Canadian)               |        |
| 9        | 4-943-148-42 | FOOT (F58175SW) (WR735S:AEP, G, AUS, WR701ES)   |        |

| Ref. No.      | Part No.     | Description   | Remark |
|---------------|--------------|---|--------|
| * 10          | 3-346-265-11 | HOLDER, PC BOARD                                      |        |
| 11            | 1-575-730-11 | WIRE, FLAT TYPE (5 CORE)                              |        |
| 12            | 1-590-217-11 | WIRE, FLAT TYPE (20 CORE)                             |        |
| $\Delta$ 13   | 1-558-945-21 | CORD, POWER (POLAR. SPT-1) (WR735S:Canadian, WR701ES) |        |
| $\Delta$ 13   | 1-575-651-21 | CORD, POWER (WR735S:AEP, G)                           |        |
| $\Delta$ 13   | 1-696-845-11 | CORD, POWER (WR735S:AUS)                              |        |
| * 14          | A-2006-954-A | DOLBY (S) BOARD, COMPLETE                             |        |
| 15            | 1-533-183-11 | HOLDER, FUSE  |        |
| $\Delta$ F702 | 1-532-259-00 | FUSE, TIME-LAG (T1.6AL) (WR735S:AEP, G, AUS)          |        |
| $\Delta$ F703 | 1-532-259-00 | FUSE, TIME-LAG (T1.6AL) (WR735S:AEP, G, AUS)          |        |
| $\Delta$ F704 | 1-532-743-11 | FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES) |        |
| $\Delta$ F705 | 1-532-743-11 | FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES) |        |
| $\Delta$ T701 | 1-450-869-11 | TRANSFORMER, POWER (WR735S:Canadian, WR701ES)         |        |
| $\Delta$ T701 | 1-450-870-11 | TRANSFORMER, POWER (WR735S:AEP, G, AUS)               |        |

## 6-2. FRONT PANEL SECTION

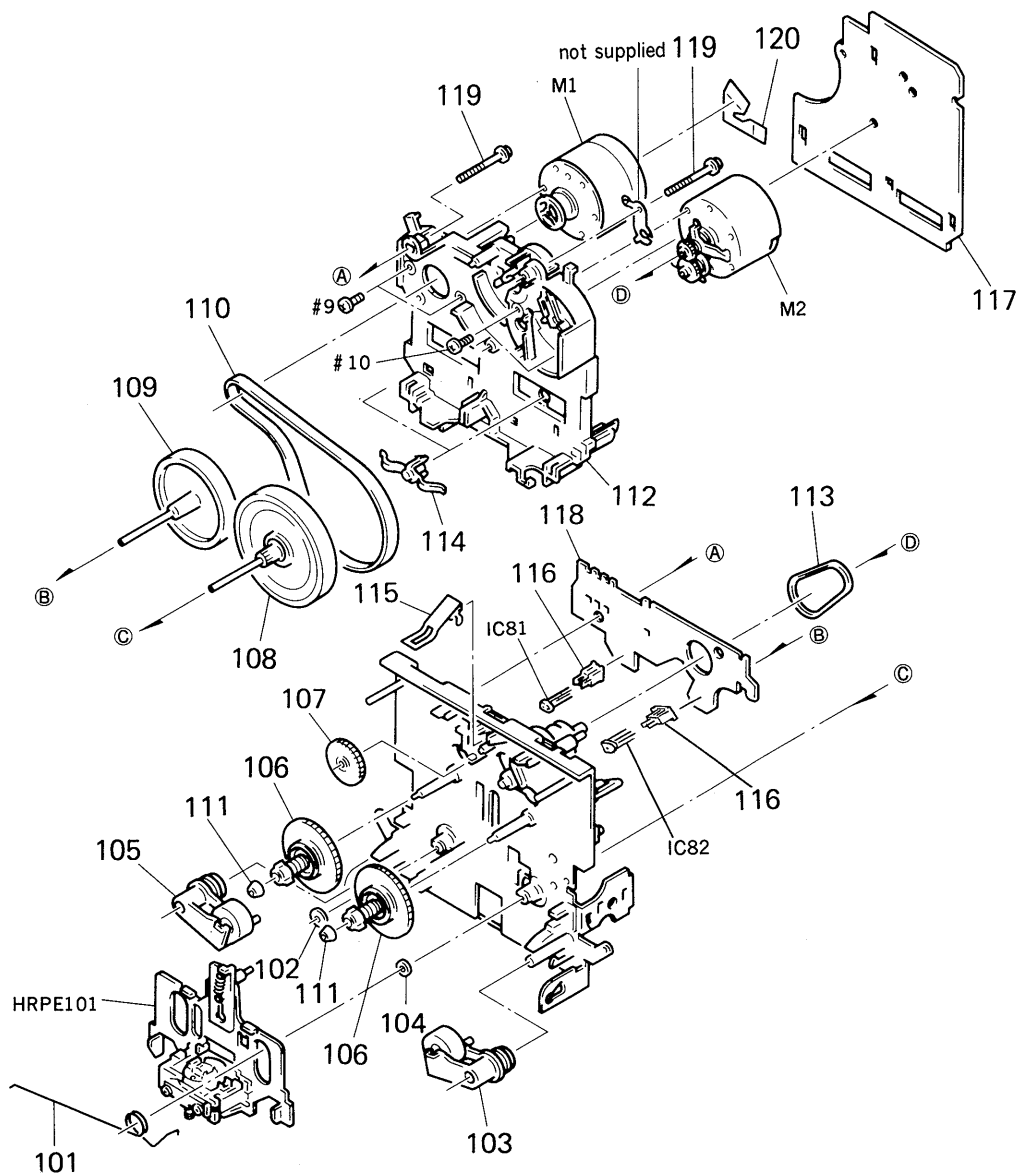
- ▲ A: PANEL board
- ▲ D: SW (B) board
- ▲ F: SW (A) board
- ▲ G: POWER SW board
- ▲ H: H. P. board



| Ref. No. | Part No.     | Description                       | Remark |
|----------|--------------|-----------------------------------|--------|
| 51       | 3-377-334-01 | KNOB (REC)                        |        |
| 52       | 3-367-431-01 | KNOB (BAL)                        |        |
| 53       | 3-380-950-01 | KNOB (VOL)                        |        |
| 54       | 4-942-568-01 | EMBLEM (NO. 5), SONY              |        |
| 55       | 3-387-820-11 | PANEL, FRONT (WR735S:Canadian)    |        |
| 56       | 3-387-820-21 | PANEL, FRONT (WR735S:AEP, G, AUS) |        |
| 57       | X-3366-923-1 | PANEL (BASE) ASSY                 |        |
| 58       | 3-387-823-01 | WINDOW (M) (WR735S:AEP, G, AUS)   |        |
| 59       | 3-387-823-11 | WINDOW (M) (WR735S:Canadian)      |        |
| 60       | 3-377-329-11 | BUTTON (COUNTER)                  |        |
| 61       | 3-354-932-01 | BUTTON (POWER)                    |        |
| 62       | 3-387-825-01 | BUTTON (CONTROL)                  |        |
| 63       | X-3340-195-1 | HOLDER (R) ASSY, CASSETTE         |        |
| 64       | 3-354-960-01 | SPRING (LOADING R), TORSION       |        |
| 65       | 3-354-962-01 | SPRING (EJ SAFETY SPRING R)       |        |
| 66       | 3-354-956-01 | LEVER (EJ SAFETY LEVER R)         |        |
| 67       | 3-354-963-01 | DAMPER                            |        |
| 68       | 1-575-905-11 | WIRE, FLAT TYPE (9 CORE)          |        |
| 69       | 4-951-620-01 | SCREW (2.6X8), +BVTP              |        |
| * 68     | 3-354-954-01 | LEVER (LOCK LEVER R)              |        |
| 69       | 3-354-957-01 | JOINT (LOCK LEVER)                |        |
| 70       | 1-690-589-31 | WIRE, FLAT TYPE (13 CORE)         |        |
| 71       | 3-354-963-01 | DAMPER                            |        |

| Ref. No. | Part No.     | Description                                      | Remark                      |
|----------|--------------|--|-----------------------------|
| 71       | 1-690-729-11 | WIRE, FLAT TYPE (27 CORE)                        |                             |
| * 72     | A-2007-029-A | PANEL BOARD, COMPLETE (WR735S:Canadian, WR701ES) |                             |
| * 72     | A-2007-030-A | PANEL BOARD, COMPLETE (WR735S:AEP, G, AUS)       |                             |
| 73       | 1-575-905-11 | WIRE, FLAT TYPE (9 CORE)                         |                             |
| 74       | 3-354-959-01 | SPRING (LOADING L), TORSION                      |                             |
| 75       | 3-356-935-01 | SPRING   |                             |
| 76       | 3-354-961-01 | SPRING (EJ SAFETY SPRING L)                      |                             |
| 77       | 3-354-955-01 | LEVER (EJ SAFETY LEVER L)                        |                             |
| * 78     | 3-354-953-01 | LEVER (LOCK LEVER L)                             |                             |
| 79       | 3-354-957-01 | JOINT (LOCK LEVER)                               |                             |
| 80       | X-3340-194-1 | HOLDER (L) ASSY, CASSETTE                        |                             |
| 81       | 3-377-328-01 | BUTTON (EJECT)                                   |                             |
| 82       | 3-387-822-01 | SLIDER (EJECT)                                   |                             |
| 83       | 3-382-382-01 | SPRING, COMPRESSION                              |                             |
| 84       | 1-590-241-11 | WIRE, FLAT TYPE (7 CORE)                         |                             |
| 85       | 1-590-241-11 | WIRE, FLAT TYPE (11 CORE)                        |                             |
| 86       | 4-922-518-01 | KNOB (TIMER)                                     |                             |
| 87       | 3-380-952-01 | BUTTON   |                             |
| 88       | 3-308-823-11 | SPRING   |                             |
| 89       | 3-308-823-11 | SPRING   |                             |
| VFD901   |              | 1-517-162-11                                     | INDICATOR TUBE, FLUORESCENT |

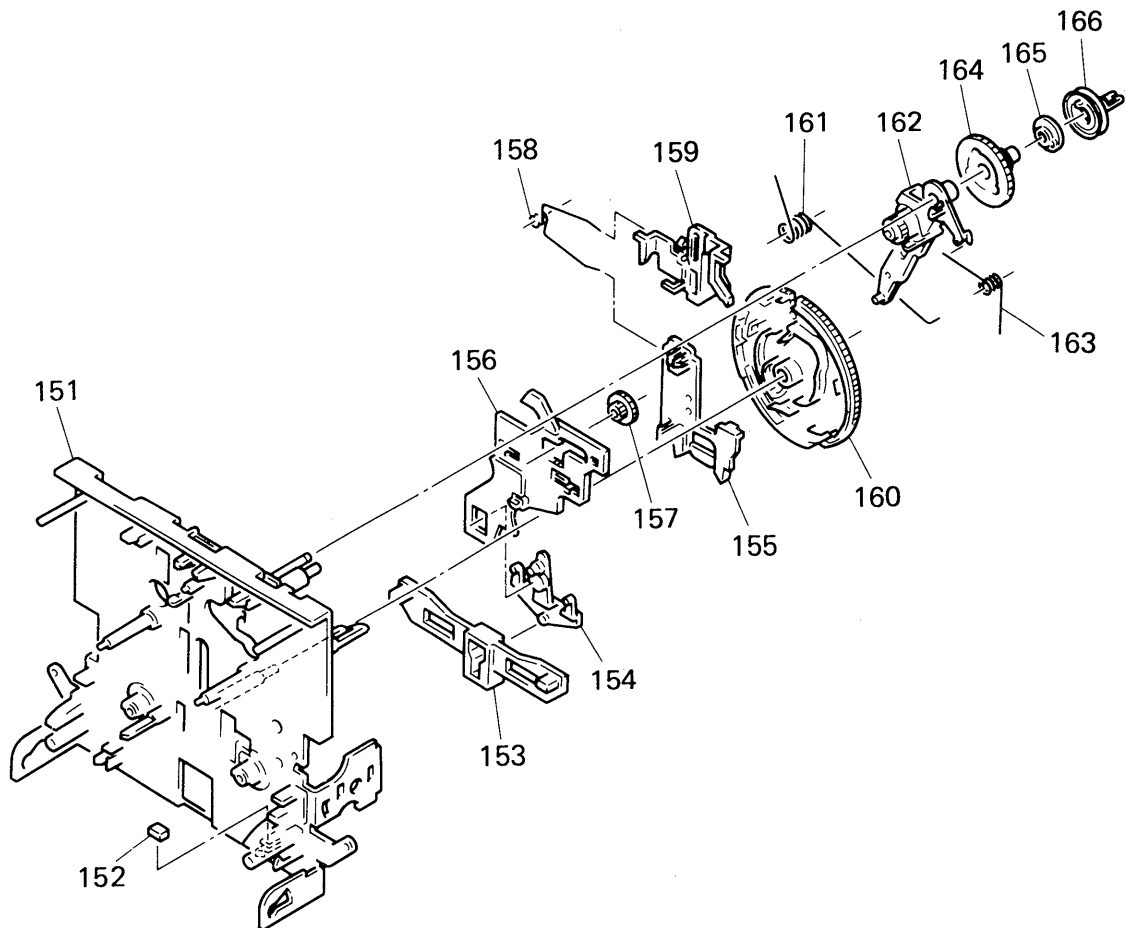
**6-3. MECHANISM SECTION (1)**  
**(DECK A, B: TCM-190RB11C)**



| Ref. No. | Part No.     | Description                     | Remark |
|----------|--------------|---------------------------------|--------|
| 101      | 3-359-455-01 | SPRING, TORSION                 |        |
| 102      | 3-356-714-01 | WASHER                          |        |
| 103      | X-3359-408-1 | LEVER (PINCH LEVER FWD) ASSY    |        |
| 104      | 3-356-713-01 | WASHER                          |        |
| 105      | X-3359-409-1 | LEVER (PINCH LEVER REV) ASSY    |        |
| 106      | X-3362-078-1 | TABLE ASSY (B), REEL            |        |
| 107      | 3-359-424-01 | GEAR (REV GEAR)                 |        |
| 108      | X-3359-406-1 | FLYWHEEL (FWD) ASSY             |        |
| 109      | X-3359-410-1 | FLYWHEEL (REV) ASSY             |        |
| 110      | 3-359-417-01 | BELT (FLAT), CAPSTAN            |        |
| 111      | 3-362-308-01 | CAP (REEL)                      |        |
| * 112    | 3-359-436-01 | BASE (THRUST RETAINER), FITTING |        |
| 113      | 3-359-466-01 | BELT (FR), SQUARE               |        |

| Ref. No. | Part No.     | Description                             | Remark |
|----------|--------------|---|--------|
| 114      | 3-575-321-00 | RETAINER, THRUST, CAPSTAN               |        |
| 115      | 3-359-430-01 | SPRING (CASSETTE RETAINER), LEAF        |        |
| 116      | 3-343-419-01 | HOLDER (S SENSOR A)                     |        |
| * 117    | A-2006-401-A | MD HX BOARD, COMPLETE                   |        |
| 118      | 1-634-841-14 | SW-A BOARD                              |        |
| 119      | 3-359-414-01 | SCREW (+PTPH 2X23)                      |        |
| 120      | 1-638-983-11 | MOTOR FLEXIBLE BOARD                    |        |
| HRPE101  | A-2003-838-F | DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE) |        |
| IC81     | 8-719-710-03 | PHOTO REFLECTOR NJL5165K-B (H1)         |        |
| IC82     | 8-719-710-03 | PHOTO REFLECTOR NJL5165K-B (H1)         |        |
| M1       | X-3365-377-1 | MOTOR (CAPSTAN) ASSY                    |        |
| M2       | X-3363-501-1 | MOTOR (REEL) ASSY                       |        |

**6-4. MECHANISM SECTION (2)**  
**(DECK A, B: TCM-190RB11C)**



| Ref.No. | Part No.     | Description              | Remark |
|---------|--------------|--------------------------|--------|
| 151     | X-3359-415-1 | CHASSIS ASSY, MECHANICAL |        |
| 152     | 3-359-469-01 | SPACER                   |        |
| * 153   | 3-359-425-01 | SLIDER (REVERSE SLIDER)  |        |
| 154     | 3-359-426-01 | LEVER (REVERSE LEVER)    |        |
| * 155   | 3-359-427-01 | SLIDER (REVERSE SLIDER)  |        |
| * 156   | 3-359-415-01 | SLIDER (TRIGGER SLIDER)  |        |
| 157     | 3-359-448-01 | GEAR (TRIGGER)           |        |
| 158     | 3-359-454-01 | SPRING, TORSION          |        |

| Ref.No. | Part No.     | Description                      | Remark |
|---------|--------------|----------------------------------|--------|
| 159     | 3-359-429-01 | SLIDER (BRAKE PLATE)             |        |
| 160     | 3-359-420-01 | GEAR (CAM GEAR)                  |        |
| 161     | 3-359-456-01 | SPRING (TRIGGER SPRING), TORSION |        |
| 162     | X-3359-405-1 | LEVER (FR ARM) ASSY              |        |
| 163     | 3-359-453-01 | SPRING (FR ARM), TORSION         |        |
| 164     | 3-359-419-01 | GEAR (FR GEAR)                   |        |
| 165     | 3-359-421-01 | CLUTCH (REEL DISK)               |        |
| 166     | 3-359-418-01 | PULLEY (FR PULLEY)               |        |

# SECTION 7

## ELECTRICAL PARTS LIST

## NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA.:  $\mu$ A. uPA.:  $\mu$ PA.  
uPB.:  $\mu$ PB. uPC.:  $\mu$ PC. uPD.:  $\mu$ PD.
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

When indicating parts by reference number, please include the board.

The components identified by mark  $\Delta$  or dotted line with mark.  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Abbreviations  
G : German model  
AUS : Australian model

| Ref. No. | Part No.     | Description                        | Remark   | Ref. No. | Part No.     | Description                 | Remark  |
|----------|--------------|------------------------------------|----------|----------|--------------|-----------------------------|---------|
| *        | A-2006-954-A | DOLBY (S) BOARD, COMPLETE<br>***** |          | C36      | 1-165-319-11 | CERAMIC CHIP 0.1uF          | 50V     |
|          |              | < CAPACITOR >                      |          | C37      | 1-164-222-11 | CERAMIC CHIP 0.22uF         | 25V     |
| C1       | 1-164-222-11 | CERAMIC CHIP 0.22uF                | 25V      | C38      | 1-163-024-00 | CERAMIC CHIP 0.018uF        | 10% 50V |
| C2       | 1-135-177-21 | TANTALUM CHIP 1uF                  | 20% 20V  | C39      | 1-104-555-11 | FILM CHIP 0.022uF           | 5% 16V  |
| C3       | 1-104-558-91 | FILM CHIP 0.039uF                  | 5% 16V   | C40      | 1-104-563-11 | FILM CHIP 0.1uF             | 5% 16V  |
| C4       | 1-163-007-11 | CERAMIC CHIP 680PF                 | 10% 50V  |          |              | < CONNECTOR >               |         |
| C5       | 1-163-009-11 | CERAMIC CHIP 0.001uF               | 10% 50V  | * CN1    | 1-537-473-11 | TERMINAL (LEAD PIN)         |         |
|          |              | < IC >                             |          |          |              | < IC >                      |         |
| C6       | 1-164-717-11 | CERAMIC CHIP 0.0082uF              | 5% 50V   | IC1      | 8-752-056-51 | IC CXA1417Q                 |         |
| C7       | 1-164-222-11 | CERAMIC CHIP 0.22uF                | 25V      | IC2      | 8-759-711-85 | IC NJM4580E-D               |         |
| C8       | 1-104-562-11 | FILM CHIP 0.082uF                  | 5% 16V   |          |              | < RESISTOR >                |         |
| C9       | 1-104-553-11 | FILM CHIP 0.015uF                  | 5% 16V   | R1       | 1-216-013-00 | METAL CHIP 33 5% 1/10W      |         |
| C10      | 1-165-319-11 | CERAMIC CHIP 0.1uF                 | 50V      | R2       | 1-216-675-11 | METAL CHIP 10K 0.5% 1/10W   |         |
| C11      | 1-135-145-11 | TANTALUM CHIP 0.47uF               | 10% 35V  | R3       | 1-216-681-11 | METAL CHIP 18K 0.5% 1/10W   |         |
| C12      | 1-164-222-11 | CERAMIC CHIP 0.22uF                | 25V      | R4       | 1-218-774-11 | METAL CHIP 820K 0.50% 1/10W |         |
| C13      | 1-165-319-11 | CERAMIC CHIP 0.1uF                 | 50V      | R5       | 1-216-668-11 | METAL CHIP 5.1K 0.5% 1/10W  |         |
| C14      | 1-162-568-11 | CERAMIC CHIP 0.33uF                | 10% 16V  | R6       | 1-216-656-11 | METAL CHIP 1.6K 0.5% 1/10W  |         |
| C15      | 1-104-562-11 | FILM CHIP 0.082uF                  | 5% 16V   | R7       | 1-216-657-11 | METAL CHIP 1.8K 0.5% 1/10W  |         |
| C16      | 1-135-145-11 | TANTALUM CHIP 0.47uF               | 10% 35V  | R8       | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W    |         |
| C17      | 1-165-319-11 | CERAMIC CHIP 0.1uF                 | 50V      | R9       | 1-216-058-00 | METAL GLAZE 2.4K 5% 1/10W   |         |
| C18      | 1-164-222-11 | CERAMIC CHIP 0.22uF                | 25V      | R10      | 1-216-654-11 | METAL CHIP 1.3K 0.5% 1/10W  |         |
| C19      | 1-163-035-00 | CERAMIC CHIP 0.047uF               | 50V      |          |              | < RESISTOR >                |         |
| C20      | 1-104-553-11 | FILM CHIP 0.015uF                  | 5% 16V   | R11      | 1-216-013-00 | METAL CHIP 33 5% 1/10W      |         |
| C21      | 1-164-717-11 | CERAMIC CHIP 0.0082uF              | 5% 50V   | R12      | 1-216-017-00 | METAL CHIP 47 5% 1/10W      |         |
| C22      | 1-163-009-11 | CERAMIC CHIP 0.001uF               | 10% 50V  | R13      | 1-216-051-00 | METAL CHIP 1.2K 5% 1/10W    |         |
| C23      | 1-164-161-11 | CERAMIC CHIP 0.0022uF              | 10% 100V | R14      | 1-216-065-00 | METAL CHIP 4.7K 5% 1/10W    |         |
| C24      | 1-163-005-11 | CERAMIC CHIP 470PF                 | 10% 50V  | R15      | 1-216-058-00 | METAL GLAZE 2.4K 5% 1/10W   |         |
| C25      | 1-163-012-00 | CERAMIC CHIP 0.0018uF              | 10% 50V  |          |              | < RESISTOR >                |         |
| C26      | 1-104-558-91 | FILM CHIP 0.039uF                  | 5% 16V   | R16      | 1-216-013-00 | METAL CHIP 33 5% 1/10W      |         |
| C27      | 1-163-012-00 | CERAMIC CHIP 0.0018uF              | 10% 50V  | R17      | 1-216-017-00 | METAL CHIP 47 5% 1/10W      |         |
| C28      | 1-163-012-00 | CERAMIC CHIP 0.0018uF              | 10% 50V  | R18      | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W    |         |
| C29      | 1-104-563-11 | FILM CHIP 0.1uF                    | 5% 16V   | R19      | 1-216-656-11 | METAL CHIP 1.6K 0.5% 1/10W  |         |
| C30      | 1-135-145-11 | TANTALUM CHIP 0.47uF               | 10% 35V  | R20      | 1-216-668-11 | METAL CHIP 5.1K 0.5% 1/10W  |         |
| C31      | 1-104-555-11 | FILM CHIP 0.022uF                  | 5% 16V   |          |              | < RESISTOR >                |         |
| C32      | 1-104-563-11 | FILM CHIP 0.1uF                    | 5% 16V   | R21      | 1-218-774-11 | METAL CHIP 820K 0.50% 1/10W |         |
| C33      | 1-163-024-00 | CERAMIC CHIP 0.018uF               | 10% 50V  | R22      | 1-216-655-11 | METAL CHIP 1.5K 0.5% 1/10W  |         |
| C34      | 1-104-563-11 | FILM CHIP 0.1uF                    | 5% 16V   | R23      | 1-216-678-11 | METAL CHIP 13K 0.5% 1/10W   |         |
| C35      | 1-163-012-00 | CERAMIC CHIP 0.0018uF              | 10% 50V  | R24      | 1-216-673-11 | METAL CHIP 8.2K 0.5% 1/10W  |         |
|          |              |                                    |          | R25      | 1-216-675-11 | METAL CHIP 10K 0.5% 1/10W   |         |

| Ref. No. | Part No.   | Description | Remark   |      |       |  |
|----------|--|-------------|----------|------|-------|--|
| R26      | 1-216-676-11   | METAL CHIP  | 11K      | 0.5% | 1/10W |  |
| R27      | 1-216-668-11   | METAL CHIP  | 5.1K     | 0.5% | 1/10W |  |
| R28      | 1-216-697-11   | METAL CHIP  | 82K      | 0.5% | 1/10W |  |
| R29      | 1-216-668-11   | METAL CHIP  | 5.1K     | 0.5% | 1/10W |  |
| R30      | 1-216-660-11   | METAL CHIP  | 2.4K     | 0.5% | 1/10W |  |
| R31      | 1-216-680-11   | METAL CHIP  | 16K      | 0.5% | 1/10W |  |
| R32      | 1-216-685-11   | METAL CHIP  | 27K      | 0.5% | 1/10W |  |
| R33      | 1-216-080-00   | METAL CHIP  | 20K      | 5%   | 1/10W |  |
| R34      | 1-216-684-11   | METAL CHIP  | 24K      | 0.5% | 1/10W |  |
| R35      | 1-216-084-00   | METAL CHIP  | 30K      | 5%   | 1/10W |  |
| R36      | 1-216-084-00   | METAL CHIP  | 30K      | 5%   | 1/10W |  |
| R37      | 1-216-074-00   | METAL CHIP  | 11K      | 5%   | 1/10W |  |
| R38      | 1-216-086-00   | METAL GLAZE | 36K      | 5%   | 1/10W |  |
| R39      | 1-216-066-00   | METAL CHIP  | 5.1K     | 5%   | 1/10W |  |
| R40      | 1-216-084-00   | METAL CHIP  | 30K      | 5%   | 1/10W |  |
| R41      | 1-216-078-00   | METAL GLAZE | 16K      | 5%   | 1/10W |  |
| R42      | 1-216-071-00   | METAL CHIP  | 8.2K     | 5%   | 1/10W |  |
| R43      | 1-216-081-00   | METAL CHIP  | 22K      | 5%   | 1/10W |  |
| R44      | 1-216-689-11   | METAL CHIP  | 39K      | 0.5% | 1/10W |  |
| R45      | 1-216-689-11   | METAL CHIP  | 39K      | 0.5% | 1/10W |  |
| R53      | 1-216-058-00   | METAL GLAZE | 2.4K     | 5%   | 1/10W |  |
| R54      | 1-216-675-11   | METAL CHIP  | 10K      | 0.5% | 1/10W |  |
| R55      | 1-216-666-11   | METAL CHIP  | 4.3K     | 0.5% | 1/10W |  |
| *****    |  |             |          |      |       |  |
| *        | A-2007-028-A MAIN BOARD, COMPLETE                      |             |          |      |       |  |
|          | (WR735S:Canadian, WR701ES)                             |             |          |      |       |  |
| *        | A-2007-057-A MAIN BOARD, COMPLETE (WR735S:AEP, G, AUS) |             |          |      |       |  |
|          | *****  |             |          |      |       |  |
|          | 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3                |             |          |      |       |  |
|          | 7-682-547-09 SCREW +BVTT 3X6 (S)                       |             |          |      |       |  |
|          | < CAPACITOR >  |             |          |      |       |  |
| C102     | 1-130-476-00   | MYLAR       | 0.0027uF | 5%   | 50V   |  |
| C104     | 1-124-925-11   | ELECT       | 2.2uF    | 20%  | 100V  |  |
| C105     | 1-130-475-00   | MYLAR       | 0.0022uF | 5%   | 50V   |  |
| C106     | 1-130-475-00   | MYLAR       | 0.0022uF | 5%   | 50V   |  |
| C107     | 1-136-174-00   | FILM        | 0.56uF   | 5%   | 50V   |  |
| C108     | 1-136-171-00   | FILM        | 0.33uF   | 5%   | 50V   |  |
| C109     | 1-124-907-11   | ELECT       | 10uF     | 20%  | 50V   |  |
| C110     | 1-124-925-11   | ELECT       | 2.2uF    | 20%  | 100V  |  |
| C121     | 1-124-903-11   | ELECT       | 1uF      | 20%  | 50V   |  |
| C122     | 1-124-903-11   | ELECT       | 1uF      | 20%  | 50V   |  |
| C123     | 1-124-443-00   | ELECT       | 100uF    | 20%  | 10V   |  |
| C124     | 1-124-902-00   | ELECT       | 0.47uF   | 20%  | 50V   |  |
| C125     | 1-164-159-11   | CERAMIC     | 0.1uF    |      | 50V   |  |
| C126     | 1-123-382-00   | ELECT       | 3.3uF    | 20%  | 100V  |  |
| C127     | 1-124-927-11   | ELECT       | 4.7uF    | 20%  | 100V  |  |
| C128     | 1-124-925-11   | ELECT       | 2.2uF    | 20%  | 100V  |  |

| Ref. No. | Part No.     | Description | Remark   |     |      |  |
|----------|--------------|-------------|----------|-----|------|--|
| C129     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C130     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C132     | 1-164-159-11 | CERAMIC     | 0.1uF    |     | 50V  |  |
| C135     | 1-162-294-31 | CERAMIC     | 0.001uF  | 10% | 50V  |  |
| C136     | 1-162-294-31 | CERAMIC     | 0.001uF  | 10% | 50V  |  |
| C141     | 1-162-283-31 | CERAMIC     | 120PF    | 10% | 50V  |  |
| C151     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C152     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C153     | 1-124-916-11 | ELECT       | 22uF     | 20% | 63V  |  |
| C154     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C181     | 1-123-382-00 | ELECT       | 3.3uF    | 20% | 100V |  |
| C183     | 1-124-902-00 | ELECT       | 0.47uF   | 20% | 50V  |  |
| C184     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C186     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C187     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C202     | 1-130-476-00 | MYLAR       | 0.0027uF | 5%  | 50V  |  |
| C204     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C205     | 1-130-475-00 | MYLAR       | 0.0022uF | 5%  | 50V  |  |
| C206     | 1-130-475-00 | MYLAR       | 0.0022uF | 5%  | 50V  |  |
| C207     | 1-136-174-00 | FILM        | 0.56uF   | 5%  | 50V  |  |
| C208     | 1-136-171-00 | FILM        | 0.33uF   | 5%  | 50V  |  |
| C209     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C210     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C221     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C222     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C223     | 1-124-443-00 | ELECT       | 100uF    | 20% | 10V  |  |
| C224     | 1-124-902-00 | ELECT       | 0.47uF   | 20% | 50V  |  |
| C225     | 1-164-159-11 | CERAMIC     | 0.1uF    |     | 50V  |  |
| C226     | 1-123-382-00 | ELECT       | 3.3uF    | 20% | 100V |  |
| C227     | 1-124-927-11 | ELECT       | 4.7uF    | 20% | 100V |  |
| C228     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C229     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C230     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C232     | 1-164-159-11 | CERAMIC     | 0.1uF    |     | 50V  |  |
| C235     | 1-162-294-31 | CERAMIC     | 0.001uF  | 10% | 50V  |  |
| C236     | 1-162-294-31 | CERAMIC     | 0.001uF  | 10% | 50V  |  |
| C241     | 1-162-283-31 | CERAMIC     | 120PF    | 10% | 50V  |  |
| C251     | 1-124-925-11 | ELECT       | 2.2uF    | 20% | 100V |  |
| C252     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C253     | 1-124-916-11 | ELECT       | 22uF     | 20% | 63V  |  |
| C254     | 1-124-907-11 | ELECT       | 10uF     | 20% | 50V  |  |
| C281     | 1-123-382-00 | ELECT       | 3.3uF    | 20% | 100V |  |
| C283     | 1-124-902-00 | ELECT       | 0.47uF   | 20% | 50V  |  |
| C284     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C286     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C287     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |
| C501     | 1-124-443-00 | ELECT       | 100uF    | 20% | 10V  |  |
| C502     | 1-124-443-00 | ELECT       | 100uF    | 20% | 10V  |  |
| C503     | 1-124-903-11 | ELECT       | 1uF      | 20% | 50V  |  |

| Ref. No. | Part No.     | Description |          | Remark   |
|----------|--------------|-------------|----------|----------|
| C521     | 1-126-916-11 | ELECT       | 1000uF   | 20% 6.3V |
| C522     | 1-124-925-11 | ELECT       | 2.2uF    | 20% 100V |
| C523     | 1-124-902-00 | ELECT       | 0.47uF   | 20% 50V  |
| C524     | 1-124-916-11 | ELECT       | 22uF     | 20% 63V  |
| C526     | 1-124-443-00 | ELECT       | 100uF    | 20% 10V  |
| C527     | 1-124-443-00 | ELECT       | 100uF    | 20% 10V  |
| C528     | 1-124-902-00 | ELECT       | 0.47uF   | 20% 50V  |
| C551     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C552     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C553     | 1-124-927-11 | ELECT       | 4.7uF    | 20% 100V |
| C554     | 1-124-927-11 | ELECT       | 4.7uF    | 20% 100V |
| C561     | 1-136-161-00 | FILM        | 0.047uF  | 5% 50V   |
| C562     | 1-136-164-00 | FILM        | 0.082uF  | 5% 50V   |
| C563     | 1-130-476-00 | MYLAR       | 0.0027uF | 5% 50V   |
| C564     | 1-130-474-00 | MYLAR       | 0.0018uF | 5% 50V   |
| C592     | 1-126-103-11 | ELECT       | 470uF    | 20% 16V  |
| C621     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C631     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C651     | 1-124-916-11 | ELECT       | 22uF     | 20% 63V  |
| C702     | 1-124-925-11 | ELECT       | 2.2uF    | 20% 100V |
| C703     | 1-124-772-11 | ELECT       | 10000uF  | 20% 25V  |
| C704     | 1-124-772-11 | ELECT       | 10000uF  | 20% 25V  |
| C705     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C706     | 1-124-472-11 | ELECT       | 470uF    | 20% 10V  |
| C707     | 1-124-907-11 | ELECT       | 10uF     | 20% 50V  |
| C708     | 1-126-929-11 | ELECT       | 4700uF   | 20% 10V  |
| C709     | 1-126-926-11 | ELECT       | 1000uF   | 20% 10V  |
| C710     | 1-124-122-11 | ELECT       | 100uF    | 20% 50V  |
| C711     | 1-124-122-11 | ELECT       | 100uF    | 20% 50V  |
| C712     | 1-124-927-11 | ELECT       | 4.7uF    | 20% 100V |
| C801     | 1-124-472-11 | ELECT       | 470uF    | 20% 10V  |
| C802-804 |              |             |          |          |
|          | 1-164-159-11 | CERAMIC     | 0.1uF    | 50V      |
| C811     | 1-124-927-11 | ELECT       | 4.7uF    | 20% 100V |
| C812     | 1-124-477-11 | ELECT       | 47uF     | 20% 25V  |
| C813     | 1-124-477-11 | ELECT       | 47uF     | 20% 25V  |
| C820     | 1-124-902-00 | ELECT       | 0.47uF   | 20% 50V  |
| C981     | 1-164-159-11 | CERAMIC     | 0.1uF    | 50V      |
| C982     | 1-162-288-31 | CERAMIC     | 330PF    | 10% 50V  |
| C991     | 1-164-159-11 | CERAMIC     | 0.1uF    | 50V      |
| C992     | 1-162-288-31 | CERAMIC     | 330PF    | 10% 50V  |

< CONNECTOR >

|         |              |                           |
|---------|--------------|---------------------------|
| CN31A   | 1-750-425-11 | CONNECTOR, FFC/FPC 20P    |
| * CN31B | 1-580-784-11 | CONNECTOR, BOARD TO BOARD |
| * CN33B | 1-580-784-11 | CONNECTOR, BOARD TO BOARD |
| CN81A   | 1-750-414-11 | CONNECTOR, FFC/FPC 9P     |
| CN81B   | 1-750-414-11 | CONNECTOR, FFC/FPC 9P     |
| CN901   | 1-750-418-11 | CONNECTOR, FFC/FPC 13P    |

| Ref. No. | Part No.     | Description            | Remark |
|----------|--------------|------------------------|--------|
| CN902    | 1-750-432-11 | CONNECTOR, FFC/FPC 27P |        |
| CN903    | 1-750-410-11 | CONNECTOR, FFC/FPC 5P  |        |
| CN904    | 1-750-410-11 | CONNECTOR, FFC/FPC 5P  |        |
| CNP521   | 1-506-468-11 | PIN, CONNECTOR 3P      |        |
| CNP702   | 1-564-510-11 | PLUG, CONNECTOR 7P     |        |

< COMPOSITION CIRCUIT BLOCK >

|       |              |                           |
|-------|--------------|---------------------------|
| CP571 | 1-232-946-11 | COMPOSITION CIRCUIT BLOCK |
| CP581 | 1-232-946-11 | COMPOSITION CIRCUIT BLOCK |

< DIODE >

|          |              |               |
|----------|--------------|---------------|
| D121     | 8-719-987-63 | DIODE 1N4148M |
| D221     | 8-719-987-63 | DIODE 1N4148M |
| D502     | 8-719-987-63 | DIODE 1N4148M |
| D505     | 8-719-933-54 | DIODE HZS9A2L |
| D551-554 |              |               |
|          | 8-719-200-77 | DIODE 10E2N   |
| D561     | 8-719-987-63 | DIODE 1N4148M |
| D562     | 8-719-987-63 | DIODE 1N4148M |
| D601     | 8-719-987-63 | DIODE 1N4148M |
| D611     | 8-719-987-63 | DIODE 1N4148M |
| D702-708 |              |               |
|          | 8-719-200-77 | DIODE 10E2N   |
| D709     | 8-719-987-63 | DIODE 1N4148M |
| D710     | 8-719-000-78 | DIODE UZL-7L2 |
| D711     | 8-719-933-33 | DIODE HZS6A1L |
| D712     | 8-719-933-33 | DIODE HZS6A1L |
| D713     | 8-719-987-63 | DIODE 1N4148M |
| D714     | 8-719-987-63 | DIODE 1N4148M |
| D715     | 8-719-000-93 | DIODE UZL-7H1 |
| D716     | 8-719-933-33 | DIODE HZS6A1L |
| D717     | 8-719-987-63 | DIODE 1N4148M |
| D801     | 8-719-987-63 | DIODE 1N4148M |
| D802     | 8-719-987-63 | DIODE 1N4148M |

< IC >

|       |              |               |
|-------|--------------|---------------|
| IC151 | 8-759-140-53 | IC UP14053BC  |
| IC251 | 8-759-140-53 | IC UP14053BC  |
| IC501 | 8-752-055-10 | IC CXA1332M   |
| IC502 | 8-752-058-57 | IC CXA1599Q   |
| IC503 | 8-759-145-58 | IC uPC4558C   |
| IC504 | 8-759-145-58 | IC uPC4558C   |
| IC505 | 8-759-916-14 | IC SN74HC04N  |
| IC506 | 8-759-916-14 | IC SN74HC04N  |
| IC507 | 8-759-300-71 | IC HD14053BFP |
| IC508 | 8-759-140-53 | IC UP14053BC  |
| IC509 | 8-752-055-61 | IC CXA1578P   |
| IC511 | 8-759-635-26 | IC M5283P     |
| IC702 | 8-759-634-51 | IC M5218AP    |

| Ref. No. | Part No.     | Description             | Remark |
|----------|--------------|-------------------------|--------|
| IC801    | 8-752-841-99 | IC CXP82316-019Q        |        |
| IC802    | 8-759-634-84 | IC M50255P              |        |
| IC803    | 8-759-000-48 | IC MC14052BCP           |        |
| IC804    | 8-759-207-05 | IC TA7272P              |        |
| IC805    | 8-759-009-06 | IC MC14052BF            |        |
| IC811    | 8-759-165-82 | IC PST600E-T            |        |
|          |              | < JACK >                |        |
| J501     | 1-565-258-11 | JACK, PIN 4P (LINE)     |        |
|          |              | < COIL >                |        |
| * L981   | 1-420-872-00 | COIL, AIR CORE          |        |
| * L991   | 1-420-872-00 | COIL, AIR CORE          |        |
|          |              | < FILTER >              |        |
| LPF101   | 1-231-388-00 | FILTER, LOW PASS        |        |
| LPF201   | 1-231-388-00 | FILTER, LOW PASS        |        |
|          |              | < TRANSISTOR >          |        |
| Q101     | 8-729-900-80 | TRANSISTOR DTC114ES     |        |
| Q121     | 8-729-922-37 | TRANSISTOR 2SD2144S-UVW |        |
| Q122     | 8-729-620-05 | TRANSISTOR 2SC2603-EF   |        |
| Q141     | 8-729-620-05 | TRANSISTOR 2SC2603-EF   |        |
| Q201     | 8-729-900-80 | TRANSISTOR DTC114ES     |        |
| Q221     | 8-729-922-37 | TRANSISTOR 2SD2144S-UVW |        |
| Q222     | 8-729-620-05 | TRANSISTOR 2SC2603-EF   |        |
| Q241     | 8-729-620-05 | TRANSISTOR 2SC2603-EF   |        |
| Q501     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q504     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q505     | 8-729-900-80 | TRANSISTOR DTC114ES     |        |
| Q506     | 8-729-900-80 | TRANSISTOR DTC114ES     |        |
| Q507     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q521     | 8-729-821-04 | TRANSISTOR 2SA1317-STU  |        |
| Q522     | 8-729-620-05 | TRANSISTOR 2SC2603-EF   |        |
| Q523     | 8-729-900-80 | TRANSISTOR DTC114ES     |        |
| Q524     | 8-729-821-04 | TRANSISTOR 2SA1317-STU  |        |
| Q525     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q526     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q541     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q561     | 8-729-900-74 | TRANSISTOR DTC143TS     |        |
| Q562     | 8-729-900-74 | TRANSISTOR DTC143TS     |        |
| Q563     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q564     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q570     | 8-729-900-89 | TRANSISTOR DTC144ES     |        |
| Q571     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |
| Q601     | 8-729-900-89 | TRANSISTOR DTC144ES     |        |
| Q602     | 8-729-900-89 | TRANSISTOR DTC144ES     |        |
| Q603     | 8-729-900-65 | TRANSISTOR DTA144ES     |        |

| Ref. No. | Part No.     | Description            | Remark |
|----------|--------------|------------------------|--------|
| Q604     | 8-729-900-65 | TRANSISTOR DTA144ES    |        |
| Q605     | 8-729-900-61 | TRANSISTOR DTA114ES    |        |
| Q611     | 8-729-900-89 | TRANSISTOR DTC144ES    |        |
| Q612     | 8-729-900-89 | TRANSISTOR DTC144ES    |        |
| Q613     | 8-729-900-65 | TRANSISTOR DTA144ES    |        |
| Q614     | 8-729-900-65 | TRANSISTOR DTA144ES    |        |
| Q615     | 8-729-900-61 | TRANSISTOR DTA114ES    |        |
| Q621     | 8-729-821-04 | TRANSISTOR 2SA1317-STU |        |
| Q631     | 8-729-821-04 | TRANSISTOR 2SA1317-STU |        |
| Q651     | 8-729-900-61 | TRANSISTOR DTA114ES    |        |
| Q652     | 8-729-900-80 | TRANSISTOR DTC114ES    |        |
| Q653     | 8-729-900-89 | TRANSISTOR DTC144ES    |        |
| Q702     | 8-729-620-05 | TRANSISTOR 2SC2603-EF  |        |
| Q703     | 8-729-231-60 | TRANSISTOR 2SD1406-YGR |        |
| Q704     | 8-729-900-74 | TRANSISTOR DTC143TS    |        |
| Q705     | 8-729-900-74 | TRANSISTOR DTC143TS    |        |
| Q706     | 8-729-141-83 | TRANSISTOR 2SB1094-LK  |        |
| Q707     | 8-729-231-60 | TRANSISTOR 2SD1406-YGR |        |
| Q708     | 8-729-821-04 | TRANSISTOR 2SA1317-STU |        |
| Q709     | 8-729-140-04 | TRANSISTOR 2SB1116A-L  |        |
| Q801     | 8-729-900-89 | TRANSISTOR DTC144ES    |        |
| Q804     | 8-729-801-93 | TRANSISTOR 2SD1387-3   |        |
| Q805     | 8-729-801-93 | TRANSISTOR 2SD1387-3   |        |
| Q806     | 8-729-900-80 | TRANSISTOR DTC114ES    |        |
| Q807     | 8-729-620-05 | TRANSISTOR 2SC2603-EF  |        |
|          |              | < RESISTOR >           |        |
| R101     | 1-249-461-11 | CARBON 18K 5% 1/4W     |        |
| R102     | 1-247-838-00 | CARBON 2K 5% 1/4W      |        |
| R103     | 1-249-421-11 | CARBON 2.2K 5% 1/4W    |        |
| R104     | 1-249-441-11 | CARBON 100K 5% 1/4W    |        |
| R105     | 1-249-425-11 | CARBON 4.7K 5% 1/4W    |        |
| R106     | 1-247-840-00 | CARBON 2.4K 5% 1/4W    |        |
| R107     | 1-247-864-11 | CARBON 24K 5% 1/4W     |        |
| R108     | 1-249-414-11 | CARBON 560 5% 1/4W     |        |
| R109     | 1-249-437-11 | CARBON 47K 5% 1/4W     |        |
| R121     | 1-249-421-11 | CARBON 2.2K 5% 1/4W    |        |
| R122     | 1-249-421-11 | CARBON 2.2K 5% 1/4W    |        |
| R123     | 1-249-441-11 | CARBON 100K 5% 1/4W    |        |
| R124     | 1-247-713-11 | CARBON 1K 5% 1/4W      |        |
| R125     | 1-249-429-11 | CARBON 10K 5% 1/4W     |        |
| R126     | 1-247-887-00 | CARBON 220K 5% 1/4W    |        |
| R127     | 1-247-713-11 | CARBON 1K 5% 1/4W      |        |
| R128     | 1-249-437-11 | CARBON 47K 5% 1/4W     |        |
| R129     | 1-249-439-11 | CARBON 68K 5% 1/4W     |        |
| R130     | 1-249-409-11 | CARBON 220 5% 1/4W     |        |
| R131     | 1-249-441-11 | CARBON 100K 5% 1/4W    |        |
| R132     | 1-247-832-11 | CARBON 1.1K 5% 1/4W    |        |
| R133     | 1-249-441-11 | CARBON 100K 5% 1/4W    |        |

# MAIN

| Ref. No. | Part No.     | Description | Remark |    |      |
|----------|--------------|-------------|--------|----|------|
| R134     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R141     | 1-247-864-11 | CARBON      | 24K    | 5% | 1/4W |
| R142     | 1-249-424-11 | CARBON      | 3.9K   | 5% | 1/4W |
| R143     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R152     | 1-249-436-11 | CARBON      | 39K    | 5% | 1/4W |
| R153     | 1-247-858-11 | CARBON      | 13K    | 5% | 1/4W |
| R154     | 1-249-436-11 | CARBON      | 39K    | 5% | 1/4W |
| R155     | 1-247-858-11 | CARBON      | 13K    | 5% | 1/4W |
| R156     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R157     | 1-247-862-11 | CARBON      | 20K    | 5% | 1/4W |
| R158     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R171     | 1-249-424-11 | CARBON      | 3.9K   | 5% | 1/4W |
| R172     | 1-247-854-11 | CARBON      | 9.1K   | 5% | 1/4W |
| R181     | 1-249-425-11 | CARBON      | 4.7K   | 5% | 1/4W |
| R183     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
| R186     | 1-249-426-11 | CARBON      | 5.6K   | 5% | 1/4W |
| R187     | 1-249-426-11 | CARBON      | 5.6K   | 5% | 1/4W |
| R201     | 1-249-461-11 | CARBON      | 18K    | 5% | 1/4W |
| R202     | 1-247-838-00 | CARBON      | 2K     | 5% | 1/4W |
| R203     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R204     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R205     | 1-249-425-11 | CARBON      | 4.7K   | 5% | 1/4W |
| R206     | 1-247-840-00 | CARBON      | 2.4K   | 5% | 1/4W |
| R207     | 1-247-864-11 | CARBON      | 24K    | 5% | 1/4W |
| R208     | 1-249-414-11 | CARBON      | 560    | 5% | 1/4W |
| R209     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R221     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R222     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R223     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R224     | 1-247-713-11 | CARBON      | 1K     | 5% | 1/4W |
| R225     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R226     | 1-247-887-00 | CARBON      | 220K   | 5% | 1/4W |
| R227     | 1-247-713-11 | CARBON      | 1K     | 5% | 1/4W |
| R228     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R229     | 1-249-439-11 | CARBON      | 68K    | 5% | 1/4W |
| R230     | 1-249-409-11 | CARBON      | 220    | 5% | 1/4W |
| R231     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R232     | 1-247-832-11 | CARBON      | 1.1K   | 5% | 1/4W |
| R233     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R234     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R241     | 1-247-864-11 | CARBON      | 24K    | 5% | 1/4W |
| R242     | 1-249-424-11 | CARBON      | 3.9K   | 5% | 1/4W |
| R243     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R252     | 1-249-436-11 | CARBON      | 39K    | 5% | 1/4W |
| R253     | 1-247-858-11 | CARBON      | 13K    | 5% | 1/4W |
| R254     | 1-249-436-11 | CARBON      | 39K    | 5% | 1/4W |
| R255     | 1-247-858-11 | CARBON      | 13K    | 5% | 1/4W |
| R256     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R257     | 1-247-862-11 | CARBON      | 20K    | 5% | 1/4W |

| Ref. No. | Part No.     | Description | Remark |    |      |
|----------|--------------|-------------|--------|----|------|
| R258     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R271     | 1-249-424-11 | CARBON      | 3.9K   | 5% | 1/4W |
| R272     | 1-247-854-11 | CARBON      | 9.1K   | 5% | 1/4W |
| R281     | 1-249-425-11 | CARBON      | 4.7K   | 5% | 1/4W |
| R283     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
| R286     | 1-249-426-11 | CARBON      | 5.6K   | 5% | 1/4W |
| R287     | 1-249-426-11 | CARBON      | 5.6K   | 5% | 1/4W |
| R501     | 1-249-417-11 | CARBON      | 1K     | 5% | 1/4W |
| R502     | 1-215-455-00 | METAL       | 27K    | 1% | 1/6W |
| R503-505 | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R507     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R508     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R509     | 1-249-405-11 | CARBON      | 100    | 5% | 1/4W |
| R521     | 1-215-455-00 | METAL       | 27K    | 1% | 1/6W |
| R522     | 1-212-863-00 | FUSIBLE     | 18     | 5% | 1/4W |
| R523     | 1-249-430-11 | CARBON      | 12K    | 5% | 1/4W |
| R524     | 1-249-432-11 | CARBON      | 18K    | 5% | 1/4W |
| R525     | 1-249-405-11 | CARBON      | 100    | 5% | 1/4W |
| R526     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R527     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R528     | 1-249-413-11 | CARBON      | 470    | 5% | 1/4W |
| R529     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R530     | 1-247-872-11 | CARBON      | 51K    | 5% | 1/4W |
| R531     | 1-249-417-11 | CARBON      | 1K     | 5% | 1/4W |
| R532     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R533     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R543     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R544     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R545     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R551     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R552     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R561     | 1-247-846-11 | CARBON      | 4.3K   | 5% | 1/4W |
| R562     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R563     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R564     | 1-249-436-11 | CARBON      | 39K    | 5% | 1/4W |
| R565     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R566     | 1-249-426-11 | CARBON      | 5.6K   | 5% | 1/4W |
| R570     | 1-247-868-11 | CARBON      | 36K    | 5% | 1/4W |
| R571-574 | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
| R575     | 1-247-874-11 | CARBON      | 62K    | 5% | 1/4W |
| R576     | 1-247-866-11 | CARBON      | 30K    | 5% | 1/4W |
| R577     | 1-249-431-11 | CARBON      | 15K    | 5% | 1/4W |
| R578     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
| R579     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R581-584 | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
| R585     | 1-247-874-11 | CARBON      | 62K    | 5% | 1/4W |

| Ref. No. | Part No.     | Description | Remark |     |      |
|----------|--------------|-------------|--------|-----|------|
| R586     | 1-247-866-11 | CARBON      | 30K    | 5%  | 1/4W |
| R587     | 1-249-431-11 | CARBON      | 15K    | 5%  | 1/4W |
| R588     | 1-247-852-11 | CARBON      | 7.5K   | 5%  | 1/4W |
| R589     | 1-249-421-11 | CARBON      | 2.2K   | 5%  | 1/4W |
| R601     | 1-247-862-11 | CARBON      | 20K    | 5%  | 1/4W |
|          |              |             |        |     |      |
| R602     | 1-247-850-11 | CARBON      | 6.2K   | 5%  | 1/4W |
| R604     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R605     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R611     | 1-247-862-11 | CARBON      | 20K    | 5%  | 1/4W |
| R612     | 1-247-850-11 | CARBON      | 6.2K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R614     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R615     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R621-623 |              |             |        |     |      |
|          | 1-249-422-11 | CARBON      | 2.7K   | 5%  | 1/4W |
| R631-633 |              |             |        |     |      |
|          | 1-249-422-11 | CARBON      | 2.7K   | 5%  | 1/4W |
| R651     | 1-247-708-11 | CARBON      | 470    | 5%  | 1/4W |
|          |              |             |        |     |      |
| R652     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R653     | 1-215-455-00 | METAL       | 27K    | 1%  | 1/6W |
| R654     | 1-249-422-11 | CARBON      | 2.7K   | 5%  | 1/4W |
| R655     | 1-249-441-11 | CARBON      | 100K   | 5%  | 1/4W |
| R702     | 1-249-425-11 | CARBON      | 4.7K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R703     | 1-249-425-11 | CARBON      | 4.7K   | 5%  | 1/4W |
| R704     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R705     | 1-249-425-11 | CARBON      | 4.7K   | 5%  | 1/4W |
| R706     | 1-249-425-11 | CARBON      | 4.7K   | 5%  | 1/4W |
| R707     | 1-249-427-11 | CARBON      | 6.8K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R708     | 1-249-419-11 | CARBON      | 1.5K   | 5%  | 1/4W |
| R709     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
| R710     | 1-249-419-11 | CARBON      | 1.5K   | 5%  | 1/4W |
| R711     | 1-249-425-11 | CARBON      | 4.7K   | 5%  | 1/4W |
| R712     | 1-249-427-11 | CARBON      | 6.8K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R713     | 1-249-427-11 | CARBON      | 6.8K   | 5%  | 1/4W |
| R714     | 1-249-417-11 | CARBON      | 1K     | 5%  | 1/4W |
| R715     | 1-247-844-11 | CARBON      | 3.6K   | 5%  | 1/4W |
| R716     | 1-249-430-11 | CARBON      | 12K    | 5%  | 1/4W |
| R717     | 1-249-428-11 | CARBON      | 8.2K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R718     | 1-249-437-11 | CARBON      | 47K    | 5%  | 1/4W |
| R719     | 1-219-136-11 | FUSIBLE     | 0.22   | 10% | 1/4W |
| R720     | 1-249-414-11 | CARBON      | 560    | 5%  | 1/4W |
| R730     | 1-219-136-11 | FUSIBLE     | 0.22   | 10% | 1/4W |
| R801     | 1-249-429-11 | CARBON      | 10K    | 5%  | 1/4W |
|          |              |             |        |     |      |
| R803     | 1-249-422-11 | CARBON      | 2.7K   | 5%  | 1/4W |
| R804     | 1-249-426-11 | CARBON      | 5.6K   | 5%  | 1/4W |
| R805     | 1-247-852-11 | CARBON      | 7.5K   | 5%  | 1/4W |
| R806     | 1-247-858-11 | CARBON      | 13K    | 5%  | 1/4W |
| R807     | 1-249-422-11 | CARBON      | 2.7K   | 5%  | 1/4W |
|          |              |             |        |     |      |
| R808     | 1-249-426-11 | CARBON      | 5.6K   | 5%  | 1/4W |
| R809     | 1-247-852-11 | CARBON      | 7.5K   | 5%  | 1/4W |

| Ref. No. | Part No.     | Description | Remark |    |      |
|----------|--------------|-------------|--------|----|------|
| R810     | 1-247-858-11 | CARBON      | 13K    | 5% | 1/4W |
| R812     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R813     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
| R814     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R815     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
|          |              |             |        |    |      |
| R816     | 1-249-430-11 | CARBON      | 12K    | 5% | 1/4W |
| R820     | 1-247-852-11 | CARBON      | 7.5K   | 5% | 1/4W |
| R821     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R823     | 1-249-437-11 | CARBON      | 47K    | 5% | 1/4W |
| R824     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
|          |              |             |        |    |      |
| R825     | 1-249-430-11 | CARBON      | 12K    | 5% | 1/4W |
| R826     | 1-247-887-00 | CARBON      | 220K   | 5% | 1/4W |
| R827     | 1-247-862-11 | CARBON      | 20K    | 5% | 1/4W |
| R828     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R829     | 1-247-862-11 | CARBON      | 20K    | 5% | 1/4W |
|          |              |             |        |    |      |
| R830     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R831     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R832     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R834     | 1-249-441-11 | CARBON      | 100K   | 5% | 1/4W |
| R835     | 1-249-417-11 | CARBON      | 1K     | 5% | 1/4W |
|          |              |             |        |    |      |
| R838     | 1-249-417-11 | CARBON      | 1K     | 5% | 1/4W |
| R839     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R844-848 |              |             |        |    |      |
|          | 1-249-423-11 | CARBON      | 3.3K   | 5% | 1/4W |
| R849     | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
| R850     | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
|          |              |             |        |    |      |
| R851     | 1-249-423-11 | CARBON      | 3.3K   | 5% | 1/4W |
| R852     | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
| R853     | 1-249-434-11 | CARBON      | 27K    | 5% | 1/4W |
| R854     | 1-249-423-11 | CARBON      | 3.3K   | 5% | 1/4W |
| R855     | 1-249-423-11 | CARBON      | 3.3K   | 5% | 1/4W |
|          |              |             |        |    |      |
| R856     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R857     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R858     | 1-249-421-11 | CARBON      | 2.2K   | 5% | 1/4W |
| R859     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R881     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
|          |              |             |        |    |      |
| R895     | 1-249-417-11 | CARBON      | 1K     | 5% | 1/4W |
| R896     | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R897     | 1-249-429-11 | CARBON      | 10K    | 5% | 1/4W |
| R898     | 1-249-425-11 | CARBON      | 4.7K   | 5% | 1/4W |
| R899     | 1-247-840-00 | CARBON      | 2.4K   | 5% | 1/4W |
|          |              |             |        |    |      |
| R981     | 1-249-430-11 | CARBON      | 12K    | 5% | 1/4W |
| R982-984 |              |             |        |    |      |
|          | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R985     | 1-249-405-11 | CARBON      | 100    | 5% | 1/4W |
| R991     | 1-249-430-11 | CARBON      | 12K    | 5% | 1/4W |
| R992-994 |              |             |        |    |      |
|          | 1-249-433-11 | CARBON      | 22K    | 5% | 1/4W |
| R995     | 1-249-405-11 | CARBON      | 100    | 5% | 1/4W |

| Ref. No.              | Part No.     | Description               | Remark   |
|-----------------------|--------------|---------------------------|----------|
| < VARIABLE RESISTOR > |              |                           |          |
| RV171                 | 1-238-600-11 | RES, ADJ, CARBON 10K      |          |
| RV181                 | 1-238-600-11 | RES, ADJ, CARBON 10K      |          |
| RV271                 | 1-238-600-11 | RES, ADJ, CARBON 10K      |          |
| RV281                 | 1-238-600-11 | RES, ADJ, CARBON 10K      |          |
| < TEST PIN >          |              |                           |          |
| * TP1                 | 1-564-505-11 | PLUG, CONNECTOR 2P        |          |
| * TP2                 | 1-564-506-11 | PLUG, CONNECTOR 3P        |          |
| < VIBRATOR >          |              |                           |          |
| X801                  | 1-579-175-11 | VIBRATOR, CERAMIC (10MHz) |          |
| *****                 |              |                           |          |
| *                     | A-2006-401-A | MD HX BOARD, COMPLETE     |          |
| *****                 |              |                           |          |
| < CAPACITOR >         |              |                           |          |
| C11                   | 1-163-131-00 | CERAMIC CHIP 390PF        | 5% 50V   |
| C12                   | 1-136-157-00 | FILM 0.022uF              | 5% 50V   |
| C13                   | 1-124-234-00 | ELECT 22uF                | 20% 16V  |
| C18                   | 1-163-117-00 | CERAMIC CHIP 100PF        | 5% 50V   |
| C21                   | 1-163-131-00 | CERAMIC CHIP 390PF        | 5% 50V   |
| C22                   | 1-136-157-00 | FILM 0.022uF              | 5% 50V   |
| C23                   | 1-124-234-00 | ELECT 22uF                | 20% 16V  |
| C28                   | 1-163-117-00 | CERAMIC CHIP 100PF        | 5% 50V   |
| C31-33                | 1-124-234-00 | ELECT 22uF                | 20% 16V  |
| C51                   | 1-164-161-11 | CERAMIC CHIP 0.0022uF     | 10% 100V |
| C52                   | 1-164-161-11 | CERAMIC CHIP 0.0022uF     | 10% 100V |
| C53                   | 1-163-019-00 | CERAMIC CHIP 0.0068uF     | 10% 50V  |
| C54                   | 1-136-601-11 | FILM 0.01uF               | 5% 630V  |
| C56                   | 1-164-505-11 | CERAMIC CHIP 2.2uF        | 16V      |
| C57                   | 1-164-346-11 | CERAMIC CHIP 1uF          | 16V      |
| C71                   | 1-164-346-11 | CERAMIC CHIP 1uF          | 16V      |
| C80                   | 1-124-234-00 | ELECT 22uF                | 20% 16V  |
| C81                   | 1-164-232-11 | CERAMIC CHIP 0.01uF       | 50V      |
| C82                   | 1-136-157-00 | FILM 0.022uF              | 5% 50V   |
| C83                   | 1-164-004-11 | CERAMIC CHIP 0.1uF        | 10% 25V  |
| C84                   | 1-136-478-11 | FILM 470PF                | 5% 630V  |
| C85                   | 1-136-433-11 | FILM 100PF                | 5% 630V  |
| C86                   | 1-163-143-00 | CERAMIC CHIP 0.0012uF     | 5% 50V   |
| C87                   | 1-136-273-91 | FILM 75PF                 | 5% 630V  |
| C88                   | 1-163-003-11 | CERAMIC CHIP 330PF        | 10% 50V  |
| C89                   | 1-124-234-00 | ELECT 22uF                | 20% 16V  |
| C90                   | 1-107-045-00 | MICA 3.9PF                | 500V     |
| C91                   | 1-164-232-11 | CERAMIC CHIP 0.01uF       | 50V      |
| C92                   | 1-136-157-00 | FILM 0.022uF              | 5% 50V   |
| C93                   | 1-164-004-11 | CERAMIC CHIP 0.1uF        | 10% 25V  |

| Ref. No.       | Part No.     | Description                    | Remark  |
|----------------|--------------|--------------------------------|---------|
| C94            | 1-136-478-11 | FILM 470PF                     | 5% 630V |
| C95            | 1-136-433-11 | FILM 100PF                     | 5% 630V |
| C96            | 1-163-143-00 | CERAMIC CHIP 0.0012uF          | 5% 50V  |
| C97            | 1-136-273-91 | FILM 75PF                      | 5% 630V |
| C98            | 1-163-003-11 | CERAMIC CHIP 330PF             | 10% 50V |
| C99            | 1-164-005-11 | CERAMIC CHIP 0.47uF            | 25V     |
| < CONNECTOR >  |              |                                |         |
| * CNP31        | 1-580-782-11 | CONNECTOR, BOARD TO BOARD      |         |
| * CNP32        | 1-580-781-11 | PIN, CONNECTOR (PC BOARD) 7P   |         |
| * CNP33        | 1-580-782-11 | CONNECTOR, BOARD TO BOARD      |         |
| * CNP71        | 1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |         |
| * CNP72        | 1-580-411-11 | SOCKET, CONNECTOR 4P           |         |
| < DIODE >      |              |                                |         |
| D31            | 8-719-404-46 | DIODE MA110                    |         |
| < IC >         |              |                                |         |
| IC31           | 8-759-106-02 | IC uPC4570G2                   |         |
| IC81           | 8-759-106-56 | IC uPC1297CA                   |         |
| < INDUCTOR >   |              |                                |         |
| L81            | 1-410-780-11 | INDUCTOR 27mH                  |         |
| L91            | 1-410-780-11 | INDUCTOR 27mH                  |         |
| < TRANSISTOR > |              |                                |         |
| Q51-53         | 8-729-808-01 | TRANSISTOR 2SD1622-S           |         |
| Q71            | 8-729-216-22 | TRANSISTOR 2SA1162-G           |         |
| < RESISTOR >   |              |                                |         |
| R11            | 1-216-099-00 | METAL CHIP 120K 5%             | 1/10W   |
| R12            | 1-216-025-00 | METAL CHIP 100 5%              | 1/10W   |
| R13            | 1-216-100-00 | METAL GLAZE 130K 5%            | 1/10W   |
| R14            | 1-216-067-00 | METAL CHIP 5.6K 5%             | 1/10W   |
| R21            | 1-216-099-00 | METAL CHIP 120K 5%             | 1/10W   |
| R22            | 1-216-025-00 | METAL CHIP 100 5%              | 1/10W   |
| R23            | 1-216-100-00 | METAL GLAZE 130K 5%            | 1/10W   |
| R24            | 1-216-067-00 | METAL CHIP 5.6K 5%             | 1/10W   |
| R31            | 1-216-033-00 | METAL CHIP 220 5%              | 1/10W   |
| R32            | 1-216-033-00 | METAL CHIP 220 5%              | 1/10W   |
| R51            | 1-216-097-00 | METAL CHIP 100K 5%             | 1/10W   |
| R52            | 1-216-097-00 | METAL CHIP 100K 5%             | 1/10W   |
| R53            | 1-216-073-00 | METAL CHIP 10K 5%              | 1/10W   |
| R54            | 1-216-309-00 | METAL CHIP 5.6 5%              | 1/10W   |
| R55            | 1-216-309-00 | METAL CHIP 5.6 5%              | 1/10W   |
| R57            | 1-216-298-00 | METAL CHIP 2.2 5%              | 1/10W   |
| R71            | 1-216-082-00 | METAL GLAZE 24K 5%             | 1/10W   |

| Ref. No. | Part No.     | Description | Remark |    |       |
|----------|--------------|-------------|--------|----|-------|
| R72      | 1-216-081-00 | METAL CHIP  | 22K    | 5% | 1/10W |
| R73      | 1-216-089-00 | METAL CHIP  | 47K    | 5% | 1/10W |
| R74      | 1-216-089-00 | METAL CHIP  | 47K    | 5% | 1/10W |
| R81      | 1-216-073-00 | METAL CHIP  | 10K    | 5% | 1/10W |
| R82      | 1-216-085-00 | METAL CHIP  | 33K    | 5% | 1/10W |
| R83      | 1-216-001-00 | METAL CHIP  | 10     | 5% | 1/10W |
| R84      | 1-216-101-00 | METAL CHIP  | 150K   | 5% | 1/10W |
| R85      | 1-216-075-00 | METAL CHIP  | 12K    | 5% | 1/10W |
| R91      | 1-216-073-00 | METAL CHIP  | 10K    | 5% | 1/10W |
| R92      | 1-216-085-00 | METAL CHIP  | 33K    | 5% | 1/10W |
| R93      | 1-216-001-00 | METAL CHIP  | 10     | 5% | 1/10W |
| R94      | 1-216-101-00 | METAL CHIP  | 150K   | 5% | 1/10W |
| R95      | 1-216-075-00 | METAL CHIP  | 12K    | 5% | 1/10W |

## &lt; VARIABLE RESISTOR &gt;

|      |              |                      |
|------|--------------|----------------------|
| RV11 | 1-238-012-11 | RES, ADJ, CARBON 1K  |
| RV21 | 1-238-012-11 | RES, ADJ, CARBON 1K  |
| RV71 | 1-241-630-11 | RES, ADJ, CARBON 10K |
| RV72 | 1-241-630-11 | RES, ADJ, CARBON 10K |
| RV81 | 1-241-122-11 | RES, ADJ, CARBON 22K |

|      |              |                      |
|------|--------------|----------------------|
| RV91 | 1-241-122-11 | RES, ADJ, CARBON 22K |
|------|--------------|----------------------|

## &lt; RELAY &gt;

|      |              |       |
|------|--------------|-------|
| RY31 | 1-515-913-11 | RELAY |
|------|--------------|-------|

## &lt; TRANSFORMER &gt;

|     |              |                              |
|-----|--------------|------------------------------|
| T51 | 1-406-417-11 | COIL, BIAS OSCILLATION       |
| T81 | 1-433-381-11 | TRANSFORMER, BIAS OSCILLATOR |
| T91 | 1-433-381-11 | TRANSFORMER, BIAS OSCILLATOR |

## &lt; TEST PIN &gt;

|        |              |                                 |
|--------|--------------|---------------------------------|
| * TP81 | 1-568-449-11 | HOUSING, CONNECTOR(PC BOARD) 3P |
|--------|--------------|---------------------------------|

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| Ref. No. | Part No.     | Description           | Remark                     |  |  |
|----------|--------------|-----------------------|----------------------------|--|--|
| *        | A-2007-029-A | PANEL BOARD, COMPLETE | (WR735S:Canadian, WR701ES) |  |  |

|   |              |                       |                      |  |  |
|---|--------------|-----------------------|----------------------|--|--|
| * | A-2007-030-A | PANEL BOARD, COMPLETE | (WR735S:AEP, G, AUS) |  |  |
|---|--------------|-----------------------|----------------------|--|--|

\*\*\*\*\*

TRANSFORMER BOARD

\*\*\*\*\*

SW(B) BOARD

\*\*\*\*\*

CONNECTOR BOARD

\*\*\*\*\*

SW(A) BOARD

\*\*\*\*\*

POWER SW BOARD

\*\*\*\*\*

H. P. BOARD

\*\*\*\*\*

1-533-183-11 HOLDER, FUSE

## &lt; CAPACITOR &gt;

|      |              |                            |         |     |     |
|------|--------------|----------------------------|---------|-----|-----|
| C185 | 1-162-294-31 | CERAMIC                    | 0.001uF | 10% | 50V |
| C285 | 1-162-294-31 | CERAMIC                    | 0.001uF | 10% | 50V |
| C591 | 1-126-103-11 | ELECT                      | 470uF   | 20% | 16V |
| C713 | 1-164-159-11 | CERAMIC                    | 0.1uF   |     | 50V |
|      |              | (WR735S:AEP, G, AUS)       |         |     |     |
| C714 | 1-164-159-11 | CERAMIC                    | 0.1uF   |     | 50V |
|      |              | (WR735S:AEP, G, AUS)       |         |     |     |
| C715 | 1-164-159-11 | CERAMIC                    | 0.1uF   |     | 50V |
|      |              | (WR735S:Canadian, WR701ES) |         |     |     |
| C716 | 1-164-159-11 | CERAMIC                    | 0.1uF   |     | 50V |
|      |              | (WR735S:Canadian, WR701ES) |         |     |     |
| C731 | 1-136-169-00 | FILM                       | 0.22uF  | 5%  | 50V |
| C732 | 1-136-169-00 | FILM                       | 0.22uF  | 5%  | 50V |
| C901 | 1-126-157-11 | ELECT                      | 10uF    | 20% | 16V |

## &lt; CONNECTOR &gt;

|         |              |                              |
|---------|--------------|------------------------------|
| * CN32A | 1-580-784-11 | CONNECTOR, BOARD TO BOARD    |
| * CN33A | 1-580-784-11 | CONNECTOR, BOARD TO BOARD    |
| CN502   | 1-750-425-11 | CONNECTOR, FFC/FPC 20P       |
| * CN703 | 1-580-230-31 | PIN, CONNECTOR (PC BOARD) 2P |
|         |              | (WR735S:AEP, G, AUS)         |
| * CN704 | 1-580-230-31 | PIN, CONNECTOR (PC BOARD) 2P |
|         |              | (WR735S:Canadian, WR701ES)   |
| CN903   | 1-691-646-11 | SOCKET, CONNECTOR 11P        |
| CN904   | 1-691-644-11 | SOCKET, CONNECTOR 7P         |
| CN905   | 1-691-646-11 | SOCKET, CONNECTOR 11P        |
| CN906   | 1-691-644-11 | SOCKET, CONNECTOR 7P         |
| CNP901  | 1-750-454-11 | CONNECTOR, FFC/FPC 13P       |
| CNP902  | 1-750-468-11 | CONNECTOR, FFC/FPC 27P       |

| Ref. No.      | Part No.     | Description   | Remark |
|---------------|--------------|---|--------|
| < CONNECTOR > |              |   |        |
| ECP1          | 1-690-880-81 | LEAD (WITH CONNECTOR)                                 |        |
| < FUSE >      |              |   |        |
| △F702         | 1-532-259-00 | FUSE, TIME-LAG (T1. 6AL) (WR735S:AEP, G, AUS)         |        |
| △F703         | 1-532-259-00 | FUSE, TIME-LAG (T1. 6AL) (WR735S:AEP, G, AUS)         |        |
| △F704         | 1-532-743-11 | FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES) |        |
| △F705         | 1-532-743-11 | FUSE, GLASS TUBE (2A/125V) (WR735S:Canadian, WR701ES) |        |
| < IC >        |              |   |        |
| IC901         | 8-741-100-48 | IC SBX1610-59   |        |
| < JACK >      |              |   |        |
| J502          | 1-507-796-71 | JACK (HEADPHONES)                                     |        |
| < RESISTOR >  |              |   |        |
| R534          | 1-247-862-11 | CARBON 20K 5% 1/4W                                    |        |
| R535          | 1-247-862-11 | CARBON 20K 5% 1/4W                                    |        |
| R536          | 1-249-431-11 | CARBON 15K 5% 1/4W                                    |        |
| R840-843      | 1-249-429-11 | CARBON 10K 5% 1/4W                                    |        |
| R871          | 1-249-429-11 | CARBON 10K 5% 1/4W                                    |        |
| R901          | 1-249-418-11 | CARBON 1.2K 5% 1/4W F                                 |        |
| R902          | 1-249-420-11 | CARBON 1.8K 5% 1/4W F                                 |        |
| R903          | 1-249-422-11 | CARBON 2.7K 5% 1/4W F                                 |        |
| R904          | 1-249-424-11 | CARBON 3.9K 5% 1/4W F                                 |        |
| R905          | 1-249-427-11 | CARBON 6.8K 5% 1/4W F                                 |        |
| R907          | 1-249-422-11 | CARBON 2.7K 5% 1/4W F                                 |        |
| R908          | 1-249-424-11 | CARBON 3.9K 5% 1/4W F                                 |        |
| R909          | 1-249-427-11 | CARBON 6.8K 5% 1/4W F                                 |        |
| R910          | 1-249-431-11 | CARBON 15K 5% 1/4W                                    |        |
| R911          | 1-249-437-11 | CARBON 47K 5% 1/4W                                    |        |
| R912          | 1-249-418-11 | CARBON 1.2K 5% 1/4W F                                 |        |
| R913          | 1-249-420-11 | CARBON 1.8K 5% 1/4W F                                 |        |
| R914          | 1-249-422-11 | CARBON 2.7K 5% 1/4W F                                 |        |
| R915          | 1-249-424-11 | CARBON 3.9K 5% 1/4W F                                 |        |
| R916          | 1-249-431-11 | CARBON 15K 5% 1/4W                                    |        |
| R917          | 1-249-418-11 | CARBON 1.2K 5% 1/4W F                                 |        |
| R918          | 1-249-420-11 | CARBON 1.8K 5% 1/4W F                                 |        |
| R919          | 1-249-418-11 | CARBON 1.2K 5% 1/4W F                                 |        |
| R920          | 1-249-420-11 | CARBON 1.8K 5% 1/4W F                                 |        |
| R921          | 1-249-422-11 | CARBON 2.7K 5% 1/4W F                                 |        |
| R922          | 1-249-424-11 | CARBON 3.9K 5% 1/4W F                                 |        |
| R923          | 1-249-427-11 | CARBON 6.8K 5% 1/4W F                                 |        |

| Ref. No.              | Part No.     | Description                                    | Remark |
|-----------------------|--------------|--|--------|
| R924                  | 1-249-427-11 | CARBON 6.8K 5% 1/4W F                          |        |
| R925                  | 1-249-431-11 | CARBON 15K 5% 1/4W                             |        |
| R926                  | 1-249-437-11 | CARBON 47K 5% 1/4W                             |        |
| R927                  | 1-249-437-11 | CARBON 47K 5% 1/4W                             |        |
| R940                  | 1-249-431-11 | CARBON 15K 5% 1/4W                             |        |
| < VARIABLE RESISTOR > |              |  |        |
| RV501                 | 1-223-332-11 | RES, VAR, CARBON 10K (REC LEVEL)               |        |
| RV502                 | 1-223-333-11 | RES, VAR, CARBON 100K (BALANCE)                |        |
| < SWITCH >            |              |  |        |
| S901                  | 1-554-303-21 | SWITCH, TACTILE (SYNCHRO DUBBING A→B (HIGH))   |        |
| S902                  | 1-554-303-21 | SWITCH, TACTILE (SYNCHRO DUBBING A→B (NORMAL)) |        |
| S903                  | 1-554-303-21 | SWITCH, TACTILE (A+B REC)                      |        |
| S904                  | 1-554-303-21 | SWITCH, TACTILE (COUNTER (RESET)) (DECK B)     |        |
| S905                  | 1-554-303-21 | SWITCH, TACTILE (COUNTER (MEMORY)) (DECK B)    |        |
| S906                  | 1-554-303-21 | SWITCH, TACTILE (COUNTER (MEMORY)) (DECK A)    |        |
| S907                  | 1-554-303-21 | SWITCH, TACTILE (AUTO CALIBRATION) (DECK A)    |        |
| S908                  | 1-554-303-21 | SWITCH, TACTILE (AUTO CALIBRATION) (DECK B)    |        |
| S909                  | 1-554-303-21 | SWITCH, TACTILE (■) (DECK A)                   |        |
| S910                  | 1-554-303-21 | SWITCH, TACTILE (▷) (DECK A)                   |        |
| S911                  | 1-554-303-21 | SWITCH, TACTILE (< ) (DECK A)                  |        |
| S912                  | 1-554-303-21 | SWITCH, TACTILE (   PAUSE) (DECK A)            |        |
| S913                  | 1-554-303-21 | SWITCH, TACTILE (● REC MUTE) (DECK A)          |        |
| S914                  | 1-554-303-21 | SWITCH, TACTILE (● REC) (DECK A)               |        |
| S915                  | 1-554-303-21 | SWITCH, TACTILE (◀◀) (DECK A)                  |        |
| S916                  | 1-554-303-21 | SWITCH, TACTILE (▶▶) (DECK A)                  |        |
| S917                  | 1-554-303-21 | SWITCH, TACTILE (■) (DECK B)                   |        |
| S918                  | 1-554-303-21 | SWITCH, TACTILE (▷) (DECK B)                   |        |
| S919                  | 1-554-303-21 | SWITCH, TACTILE (< ) (DECK B)                  |        |
| S920                  | 1-554-303-21 | SWITCH, TACTILE (   PAUSE) (DECK B)            |        |
| S921                  | 1-554-303-21 | SWITCH, TACTILE (● REC MUTE) (DECK B)          |        |
| S922                  | 1-554-303-21 | SWITCH, TACTILE (◀◀) (DECK B)                  |        |
| S923                  | 1-554-303-21 | SWITCH, TACTILE (▶▶) (DECK B)                  |        |
| S924                  | 1-554-303-21 | SWITCH, TACTILE (● REC) (DECK B)               |        |
| S925                  | 1-692-465-11 | SWITCH, SLIDE (DIR MODE)                       |        |
| S927                  | 1-554-118-00 | SWITCH, PUSH (1 KEY) (MPX FILTER)              |        |
| S928                  | 1-692-466-11 | SWITCH, ROTARY (DOLBY NR)                      |        |
| S930                  | 1-554-303-21 | SWITCH, TACTILE (COUNTER (RESET)) (DECK A)     |        |
| S931                  | 1-554-118-00 | SWITCH, PUSH (1 KEY) (POWER)                   |        |

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

## &lt; FLUORESCENT INDICATOR &gt;

VFD901 1-517-162-11 INDICATOR TUBE, FLUORESCENT

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\* 1-634-841-14 SW-A BOARD

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## &lt; CONNECTOR &gt;

\* CNP81 1-568-852-11 SOCKET, CONNECTOR 9P

## &lt; IC &gt;

IC81 8-719-710-03 IC PHOTO REFLECTOR NJL5165K-B (H1)

IC82 8-719-710-03 IC PHOTO REFLECTOR NJL5165K-B (H1)

## &lt; RESISTOR &gt;

R81 1-249-414-11 CARBON 560 5% 1/4W

R82 1-247-818-11 CARBON 300 5% 1/4W

R83 1-247-834-11 CARBON 1.3K 5% 1/4W

R84 1-249-417-11 CARBON 1K 5% 1/4W

R85 1-249-408-11 CARBON 180 5% 1/4W

R86 1-249-408-11 CARBON 180 5% 1/4W

## &lt; SWITCH &gt;

S81 1-571-958-11 SWITCH, PUSH (1 KEY) (STOP DET)

S82 1-571-281-21 SWITCH, LEAF (70u DET)

S83 1-571-281-21 SWITCH, LEAF (METAL DET)

S84 1-571-281-21 SWITCH, LEAF (ERASE PROOF (SIDE A))

S85 1-571-281-21 SWITCH, LEAF (ERASE PROOF (SIDE B))

S86 1-571-281-21 SWITCH, LEAF (HALF DET)

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## MISCELLANEOUS

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11 1-575-730-11 WIRE, FLAT TYPE (5 CORE)

12 1-590-217-11 WIRE, FLAT TYPE (20 CORE)

△13 1-558-945-21 CORD, POWER (POLAR. SPT-1)  
(WR735S:Canadian, WR701ES)

△13 1-575-651-21 CORD, POWER (WR735S:AEP, G)

△13 1-696-845-11 CORD, POWER (WR735S:AUS)

66 1-575-905-11 WIRE, FLAT TYPE (9 CORE)

70 1-690-589-31 WIRE, FLAT TYPE (13 CORE)

71 1-690-729-11 WIRE, FLAT TYPE (27 CORE)

73 1-575-905-11 WIRE, FLAT TYPE (9 CORE)

84 1-590-241-11 WIRE, FLAT TYPE (7 CORE)

85 1-590-241-11 WIRE, FLAT TYPE (11 CORE)

120 1-638-983-11 MOTOR FLEXIBLE BOARD

HRPE101 A-2003-838-F DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE)

M1 X-3365-377-1 MOTOR (CAPSTAN) ASSY

| Ref. No. | Part No. | Description | Remark |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

M2 X-3363-501-1 MOTOR (RELL) ASSY

△T701 1-450-869-11 TRANSFORMER, POWER (WR735S:Canadian,  
WR701ES)

△T701 1-450-870-11 TRANSFORMER, POWER (WR735S:AEP, G, AUS)

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## ACCESSORIES &amp; PACKING MATERIALS

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1-465-738-11 REMOTE COMMANDER (RM-J903)  
(WR735S:Canadian)

1-558-271-11 CORD, CONNECTION

1-696-170-11 CORD, CONNECTION

2-181-754-01 COVER, BATTERY (WR735S:Canadian)

\* 3-354-913-01 CUSHION

\* 3-389-330-01 INDIVIDUAL CARTON (WR701ES)

\* 3-389-330-11 INDIVIDUAL CARTON (WR735S)

3-755-288-11 MANUAL, INSTRUCTION (RM) (ENGLISH, FRENCH)  
(WR735S:Canadian)3-756-576-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,  
SPANISH, PORTUGUESE) (WR735S:AEP)3-756-576-21 MANUAL, INSTRUCTION (ENGLISH)  
(WR735S:Canadian, AUS, WR701ES)3-756-576-31 MANUAL, INSTRUCTION (FRENCH)  
(WR735S:Canadian)3-756-576-41 MANUAL, INSTRUCTION (GERMAN, DUTCH,  
SWIDISH, ITALIAN) (WR735S:AEP)

3-756-576-51 MANUAL, INSTRUCTION (GERMAN) (WR735S:G)

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## HARDWARE LIST

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#1 7-682-548-09 SCREW +BVTT 3X8 (S)

#2 7-685-534-19 SCREW +BTP 2.6X8 TYPE2 N-S

#3 7-682-547-09 SCREW +BVTT 3X6 (S)

#4 7-621-849-00 SCREW (BV/RING)

#5 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3

#6 7-621-770-XX SCREW +BVTT 2.6X8 (S)

#7 7-621-773-95 SCREW +BVTT 2.6X6 (S)

#8 7-685-134-19 SCREW (+ PTPWH) (2.6X8)

#9 7-621-775-00 SCREW +B 2.6X3

#10 7-627-556-08 SCREW +P 2.6X2.8

The components identified by  
mark △ or dotted line with  
mark. △ are critical for  
safety. Replace only with  
part number specified.

Les composants identifiés  
par une marque △ sont  
critiques pour la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.



# TC-WR701ES/WR735S

## SONY<sup>®</sup> SERVICE MANUAL

*US Model*

TC-WR701ES

*Canadian Model*

*AEP Model*

*Australian Model*

TC-WR735S

## SUPPLEMENT-1

File this supplement with the service manual.

BLOCK DIAGRAM



### BLOCK DIAGRAM

